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Original Articles.

NATIONAL QUARANTINE AS CONSTITUTED AND ADMINISTERED IN FRANCE.

By HENRY B. MILLARD, A.M., M.D.,

FOREIGN CORRRSPONDING MEMBER OF THE FRENCH ACADEMY OF MEDICINE.

I HAVE recently presented many of the following statements, and most of this paper, to the Board of Trade and Transportation, whose efforts to ascertain the comparative value of State and national quarantine are worthy of the greatest praise as regards their thoroughness, energy, and the extreme relevance of all their questions to the accomplishment of its purpose.

In regard to the first question they propound, relative to the quarantine administration in foreign countries as furnishing precedents for the United States, I would say that I am able to speak with precision of the system of quarantine in France, as I have passed a great deal of time in that country, and being in Paris a great part of last summer was more or less in communication with the health authorities, general and local. I believe that the French system demonstrates the great value of a properly organized national quarantine.

1. Quarantine is administered throughout France in accordance with a law passed in 1876

2. The provisions of this law are carried out under the direction and advice of a body entitled the Comité Consultatif d'Hygiène Publique de France.

3. The functions of this body are not to make any new laws but to see that existing laws are executed, and to act as an advisory body to the Ministry of the Interior, in regard to such measures as seem to this council well or badly employed.

4. This body is charged with the investigation and study of all questions referred to it by the Ministry of the Interior, especially those which concern the marine sanitary police quarantines and their service, and the necessary measures to take for the prevention and combating epidemics. This committee acts also, I may add, as an advisory body, in all other questions of public health, lodgings, water, food, the sale of medicines, etc. Practically, it constitutes the real board of quarantine, as its councils, I may say, are almost invariably followed.[1]

5. The committee is composed of thirty-four members. Twelve of these are members *ex officio*, and are as follows: The Dean of the Faculty of Medicine of Paris; the Perpetual Secretary of the Academy of Medicine; Inspector-General of Sanitary Service; Director of Public Charities and Hygiene; the President of the Committee on Health of the Army; the Inspector of the Service of the Health of the Navy; the Director General of the Customs; the Director of Public Charities of Paris; the Director of Commerce of the Interior; the Inspector-General of Veterinary Colleges; the Inspecting Architect of Thermal and Sanitary buildings.

The others are appointed by the Minister of the Interior, and are at present composed of seven professors in the Faculty of Medicine of Paris, of whom one is a senator; the other members comprise the Inspector of the School of Mines, the Director of the School of Pharmacy, the Inspector of Benevolent Institutions, the Secretary-General of the Superior Council of Public Assistance, the Director of Statistics of Paris, a professor in the Institute of Agriculture, the Chief of the Laboratory of Toxicology, two or three hospital physicians, and Pasteur, member of the Institute of France, etc. The executive power of this body is delegated to a committee of three, composed at this moment of Brouardel, Dean of the Faculty of Medicine, Member of the Institute and of the Academy of Medicine; Proust (not the Deputy), Inspector General of the sanitary service of France, perhaps the best known writer upon cholera, in France, and who was twice sent to the East to study the disease; and Monod, Director of Public Charities and Hygiene. The members of the Council sign a bulletin, attesting their presence, and a member receives for each meeting he attends, fifteen francs. Certainly not a sufficient sum to enable him to squander much of the public money!

It is interesting to note the composition of this body. Perhaps, except that of Pasteur, the names of the medical members are not well known here, but are well known in the medical world; the others, by their official positions, cover everything on sea and land connected with sanitation.

Now as to the results of the labors and influence of this body: I have myself witnessed some of these. I was in Paris much of the time in July, August, and September, 1884, while the cholera was raging fiercely in Toulon, Toulouse, and Marseilles. Though the latter city is only thirteen hours from Paris, and the communication was extensive, not a single case of cholera occurred in Paris till early in November, when there were a few cases, the first case being brought from Fecamp, a small seaport in Normandy, about three hours from Paris. The quarantine regulations were admirable. Every traveller from Spain or the south of France was obliged, on his arrival, to report within a certain number of hours to the authorities, stating from what locality he had come, his address in Paris, and the condition of his health. If the formality were neglected, imprisonment usually from two to five days followed very promptly. In addition, travellers from certain localities were subjected to thorough fumigation at the stations. This year, the executive committee of the council made at least two visits to Havre while the epidemic was at its height, and, in co-operation with the municipal authorities, enforced such orders and such thorough process of cleaning, that the epidemic was stamped out, considering its virulence, in a reasonable time. The first case appeared August 2d, and the last toward October 4th. Last summer, this committee established an effective quarantine between the Austrian and German frontiers and France, travellers entering France from these countries, being subjected to careful inspection and, in necessary cases, detention. Their soiled clothing was taken from them, fumigated, washed, ironed and sent in a few hours to the traveller's destination, and this at the simple cost of carriage. It may be asked, if the French national quarantine be so efficacious, how could the cholera have been introduced so easily from Hamburg to Havre, as is usually supposed it was? I am glad to be able to contradict this belief. The first case of cholera occurred at Havre, August 2d, the first in Hamburg, August 11th, and between August 2d and August 11th it had become quite prevalent

[1] The sphere of the Committee of Hygiene of France is very extended. It embraces all hospitals, insane asylums, private and public, benevolent institutions, hygiene and public health, sanitation of villages and cities, lodgings, food and its falsifications, examination of fresh meat imported into France, epidemics in France, sanitary statistics, sanitary missions, maritime police sanitation and of coasts, *Lazzaretti*, quarantine measures, the practice of medicine and of pharmacy, the sale of poisons, mineral waters, etc.

at Havre. It is true that there were a large number of deaths from cholera in Paris this summer, the week ending September 8th there being 177, and the week ending September 15th, 148 deaths, these occurring in the city, irrespective of the suburbs, but I believe it was sporadic or cholera nostras, and was not brought in.[1] It commenced toward the middle of June in a very mild form and long before its appearance in Havre or Hamburg. It was a theory of several competent authorities in Paris that it was conveyed from that city to Havre. It did not, however, assume a severe form till the last week in August. There are two facts of interest relative to the mortality from cholera in Paris this summer. The water-supply of Paris has been for several years insufficient, and so costly that many arrondissements (or wards), have been obliged to drink the water of the Seine (boiled or not as they chose), which last summer was unusually low and dirty. It was in these arrondissements that the greatest mortality prevailed. In the three quarters, that of the Louvre, the Champs Elysées, and the fourteenth arrondissement (on the left bank of the Seine) which are the healthiest of Paris, there were not altogether more than nine or ten deaths. The next smallest mortality was in the ninth (Montmartre), which is on a height, and very clean. The greatest was in La Villette (the nineteenth) the rag-pickers' quarter. I have been unable to ascertain that outside of Havre and Paris there have been more than forty or fifty deaths up to the date of this writing in the whole of France.

As to the question of a national quarantine: "Whether it would afford increased security to the country?" I would answer: If properly managed, it should. The outposts and ports of the country should be subjected to surveillance by the Government, with the same care that they are watched to prevent the entrance of contraband goods. The sanitary cordon should be as strict as was the military cordon between the Union and Confederate outposts during our war. But it is not possible for one man, without sufficient resources, to cope with such a formidable condition of things as was suddenly developed here last summer. It is not to the point whether he could have done more. There was, however, conflict of authority; unsuccess in simple questions of transportation which any shipping merchant or railroad man could have solved at once; there were panic and confusion. Neither Government nor State did well; people were subjected to hardships and privations such as belong to war and siege. The same regulations and laws, proceeding from one central source, the national Government, should apply to every port in the country. Harmony of action could then prevail in the whole length and breadth of the land, from the temperate to the torrid zones. The senseless panics which led a town in Texas to quarantine goods purchased in New York, and to subject vessels to long quarantine at Havana and Malaga, after the disappearance of the cholera here, and which inspired one of our ablest daily papers to write editorially: "Better that every passenger in all the ships on the Atlantic be drowned in the sea than that anyone of them should introduce the Asiatic monster into our great city."

This fear of our countrymen throughout the country of cholera, as manifested this year, is not without interest as a psychological phenomenon. There were only eight absolutely proven deaths from cholera in this city, yet the whole country was in a state of trepidation. In Paris there were altogether eight hundred and twenty-eight deaths, besides numerous deaths not far outside the walls, and three or four hundred deaths daily at Hamburg and Havre, only four to eighteen miles by train from Paris, but no anxiety nor fear was felt. Yet the French are considered more excitable than we are. I do not believe, except in the matter of rapid speech and gesture, that they are so much so. Is our courage mostly of the physical kind? Undoubtedly a press, incendiary from a choleraic standpoint, and bad quarantine, produced the panic. There is, too, a great deal in a name, as well as in what the papers say. The mortality from the grippe, three years ago, was frightful, but little alarm was felt. Cholera is a scourge not more to be dreaded by people who can live under the domain of the goddess Hygeia than is the grippe.

At the same time, though national quarantine is best, it would not be desirable, if it were placed within the power of the Secretary of the Treasury to detain for several days vessels from a non-infected port and with a clean bill of health, as was done this month in the case of La Bretagne, and early in November in the case of another vessel of the French line. A national quarantine which did not know how to manage healthy ships from healthy ports would not be an advantage, at least to commerce.

I do not believe in State quarantine, but I believe less in a mixture of it with national quarantine, although this, to be perfect, would necessarily have to coöperate with all local boards of health. I cannot see but that a national quarantine, somewhat on the plan of the French, should fulfil every purpose.

NEW YORK, December 28, 1892.

[1] I am indebted for the useful abstract of the voluminous *statistiques municipales* of Paris, for the above data relative to that city, to the MEDICAL RECORD of December 17th.

THE ALIENIST AND THE GENERAL PRACTITIONER.[1]

BY JUDSON B. ANDREWS, M.D.,

BUFFALO, N. Y.

THE student of to-day appreciates, as never before, the constant widening of the field of medical knowledge, and realizes the impossibility of becoming equally proficient in all the varied departments which have been developed during recent years. He is also forced by the logic of events to acknowledge that much of the real progress in medicine is due to the zeal and patient research of the skilled specialist.

The division of labor implied by the term, the outcome of our advancing civilization, is common to all the arts and sciences, and is true evolution in medicine. It has wrought such changes that the general practitioner, who formerly decried the specialist, now joins hands with him in the effort to benefit humanity. Experience has made them friends, and the family physician willingly summons him to his aid without distrust, or the fear that he may lose the confidence of his patient.

To properly sustain his position the specialist must be thoroughly trained, first as a physician, and secondly in the branch in which he assumes to be skilled; otherwise his knowledge is superficial and inexact, and his view is narrowed down to his personal horizon, as he sees only through his own myopic glasses. Breadth of vision comes only from breadth of knowledge.

Specialism suffers more from pretenders who, without sufficient education in the general science of medicine, and with but a smattering of special training, assume to possess peculiar skill, than from the opposition or distrust of the general physician. Like all other frauds they are in time discovered and relegated to their true position in the profession. The opportunities for acquirement are too many, and the demands of the public are too great, to allow ignorance to flourish, or to excuse its existence, least of all in the man who makes pretence of special medical skill.

As all specialties are but an outgrowth from the general field of medicine, no one can successfully divorce them, or even bring them into conflict. This interdependence places an obligation upon the general practitioner to acquire a degree of knowledge of the various departments of medicine. While, for instance, he may not be able to perform the most delicate or the major operations in

[1] President's address before the New York State Medical Association, November 15, 1892.

surgery, he must at least have such a familiar acquaintance with the subject as will enable him to seek the aid of the surgeon when the need of his patient demands it.

It is only during the past few years, however, that it has been possible for him to attain such knowledge, but now the longer curriculum and the increased number of instructors in our medical schools place it in the power of the student to gain an acquaintance with the various departments, as he has the advantage of both didactic instruction and clinical illustration in the recognized special courses.

There are, however, some specialties which, till within a recent period, have been separated and kept to a large degree distinct from the general practice of medicine, and among them is that of the alienist. The reason why this state of facts existed was found in the peculiar nature of the disease, which made it impossible to care for the insane at their homes, and rendered it necessary to commit them to institutions erected for their care and treatment.

As the physician was thus compelled to intrust his patient to those in charge of asylums, he lost interest in the conduct of the case, and also the incentive to fit himself to take charge of this class of patients. It was enough for him to recognize the existence of mental disturbance, and then to adopt measures to relieve himself of the responsibility involved in the treatment. When sent to an asylum the patient passed completely from the control of the family physician, who, either because of distance or lack of opportunity, rarely, or never, visited his patient or kept himself informed of his progress.

Another fact which in part accounts for the separation of the alienist from the general practitioner is that no instruction was given in the medical schools upon the subject of insanity. It was not recognized as a physical disease, but was believed to be induced by some occult power little understood and still less investigated. The metaphysical idea of insanity, the remnant of the old view that it was the result of divine displeasure for sins committed, had a perverting influence not only in the lay mind but even in the medical profession.

Those of us who graduated from medical schools prior to twenty years ago, and I might make the number of years even less, received little, if any, instruction on the subject of insanity, and many of us never heard the disease mentioned by our instructors or found it treated of in any intelligent way in the text-books on practice.

It was inevitable that those who were in charge of asylums should be a class by themselves, and looked upon as possessing a certain knowledge and skill which was denied the rest of the profession, and that under all these conditions the study of the mind, as it was popularly called, should be a sealed book to the general practitioner.

Another reason why the subject of insanity did not claim general attention in the profession was the fact that the laws of commitment to asylums either did not demand certificates of lunacy to be made out, or if they did require them, they only registered the opinion of the physician and not the reasons on which that opinion was based. This rendered unnecessary any study of the disease and was simply giving a bonus to ignorance.

Nearly all experience and knowledge that was of any real value was centred in the few superintendents of asylums which existed in the State, and these were numbered, almost, if not quite, by the fingers of one hand. There were a few exceptions to this rule, for the profession has always counted among its numbers some men who, like our venerable friends, Professors Moore and Cronyn, were equipped in this as in other specialties.

According to the report of the Illinois State Board of Health for 1891, there are in the United States and Canada 148 medical schools and colleges, and in 53 of of them lectures are given on the subject of insanity, and in 75 of them on diseases of the nervous system. This is certainly an indication of progress in medicine during the past twenty years.

This progress is not confined to this continent, and is even more marked among other nationalities. In Great Britain the Medical Council has added to the general course the study of insanity, and has made examinations and clinical instruction an obligatory part of the five years' course of medical education. The various institutions for the care of the insane that are located in proximity to medical schools are opening their doors for clinical instruction, and the positions of teachers are being largely filled by the superintendents of asylums.

In this country attendance upon lectures on insanity has been made compulsory in but few of the schools. Other schools will, no doubt, soon be added to the number, and all should demand at least a passing knowledge of the subject from all their graduates.

The instruction should be of a practical character. Lectures given by those who have but a theoretical acquaintance with the subject, derived from reading and study, without experience in the treatment of the insane, can, in the nature of things, be of little practical utility to the student.

Years ago the importance of instruction in insanity attracted the attention of some of the ablest men in the specialty. To Dr. Gray, of Utica, one of the early presidents of this association, the profession owes a debt of gratitude for his persistent and self sacrificing labors in behalf of instruction in this branch. His lectures, among the first delivered in this city, were marvels of that clearness and precision that comes only from intimate knowledge of the subject and from personal care of the insane.

The value of this knowledge to the general practitioner can hardly be overestimated. He is called upon to make the diagnosis and to express his opinion as to the needs of his patient suffering from mental disturbance. Without instruction he is helpless and proves but a broken reed to the family when he should be the firm support.

Many cases of insanity are kept at home during the early period of the disease, when the chances of recovery, under proper care and treatment, are hopeful, from ignorance of the real condition. Too often cases of melancholia are allowed to drift on to death by suicide from the lack of appreciation of the danger which threatens. It is painful to hear of a patient sent from home to a distant point, under the delusive hope that change of climate or of surroundings will effect a cure, when from his depression and self-absorption the individual is unable to appreciate his condition or to be roused from the all-pervading mental gloom which enshrouds him, and when he demands kind, intelligent nursing and the closest attention to his condition to effect the re-establishment of his normal mental and bodily health.

With obligatory instruction in mental diseases in the curriculum of study there would be a more correct appreciation of mental states, an earlier diagnosis of the existence of disease, more intelligent treatment adopted, and, as a consequence, more favorable statistics of recovery. There would be fewer medico-legal cases and a marked diminution of will contests. Patients far advanced in dementia or suffering from general paralysis of the insane would not be received into hospitals with a favorable prognosis for recovery given to the friends. We should hear much less from physicians and from friends of the diagnosis of brain softening in simple and often curable cases of insanity.

The law now makes it the duty of the physician to fill out certificates of lunacy, and in them to record the reasons for his belief in the insanity of the patient. They should, and with a proper knowledge of the subject on the part of the physician would, contain such valid reasons on which the belief in lunacy was predicated as would carry conviction and even satisfy a jury of their sufficiency. The simple statement, I quote from a certificate, that, "he presents the usual symptoms of chronic dementia" would not shield a practitioner from a suit for false imprisonment upon insufficient grounds for his commitment to an asylum unless there actually existed more

cogent reasons for the step taken. And so long as they do exist why should not they be distinctly stated in the certificate?

Fortunately the facts of the case generally sustain the physician more strongly even than his statement in the certificate. The fundamental fact which the certificate should express is too often ignored, viz., the change in the individual, in one and all of the three directions, in his mode of feeling, thinking, or acting, corresponding to the emotions, the intellect, and the will, based upon the physical changes induced by disease, or, stating it in correct order, first the physical changes, and then the departure in mental states. Certificates thus formulated will stand the required test and will meet the demands of the State authorities, who supervise the papers of commitment.

I do not wish or intend to arraign the physician, but simply to point out the direction in which improvement can be made, and which will naturally follow with better facilities for instruction enjoyed by the younger men in the profession.

Although the family physician so generally recognizes the presence of insanity when it occurs in his patient, and also the necessity of treatment, I can but think he sometimes neglects to enforce preventive measures in cases where his influence might avert the threatened danger. It is during early life and the period of development when the greatest care should be exercised, and when the physician should interpose his authority, for the good of his patient.

The duty of the physician, as well as the parent, during these periods is well stated by Dr. Clouston, in his recent work on "The Neuroses of Development." He teaches, as all alienists and neurologists do, the doctrine of nutrition to its fullest extent. His advice is summed up in a sentence, "Fatness, self-control, orderliness, are the three most important qualities to aim at. Build up the bone and fat and muscle, especially the fat, by any means known to us, during the period of growth and development."

There is nothing so conducive to nerve equilibrium as a fully nourished body, as it gives repose and freedom from irritability. Stated in a general way it is the poorly nourished and the ill-developed who suffer from the neuroses which are so often the precursors of insanity.

Give to children fresh air; withhold from them nitrogenous and stimulating foods during the period of development of the reproductive function; repress the imaginative faculties and develop the lower centres in all of the mentally active and precocious; let the education and growth of the body take precedence, and that of the mind will naturally and healthfully follow.

Finally, promote order, method, and system. They are most important elements of mental health as well as of success, and are especially lacking in the weakly neurotic (Clouston).

Another direction in which the family physician can exercise control in the way of prevention is in opposing ill-advised and ill assorted marriages among the neurotic, the epileptic, and insane. The extent to which these unions are indulged in among the uneducated, and the indifference to the danger involved, are sufficient to arrest the thoughtful attention of those familiar with the facts. Within a few days there was admitted to the hospital under our charge a patient who had been epileptic for years, and who was married three weeks before his admission. The result was a series of epileptic attacks accompanied by maniacal violence and homicidal tendencies. His friends urged the step in the belief that marriage would cure the fits.

It is not an uncommon occurrence for friends and relatives of a man with sexual powers weakened by secret habits to seek an alliance with some unsuspecting woman in the hope of effecting a cure, and on the other hand, for the friends of a hysterical, enfeebled woman, whose reproductive functions have been blighted by some of the various disorders common to the sex, or who has suffered from insanity, to scheme to arrange a marriage which will relieve them from a burden.

What must be the baneful results of such marriages to the individuals, to their posterity, if they have any, and to the community, which is generally called upon to support not only the progeny but often the parents! Then there is the large class of defectives, the higher grade imbeciles, who are allowed to form marriages without let or hindrance. I do not doubt that every practitioner of years who may read these remarks can recall instances of one or of all of these very cases.

We cannot lay the blame at the door of the medical man, but it may lead us to inquire of ourselves whether we have done our whole duty in educating the people and informing them of the danger incurred, or in arousing a public sentiment against the consummation of such wicked frauds.

It is in these two directions, of caring for the young during the developmental period and in preventing union between the defective classes, that much can be accomplished in the way of preventing mental disorders. Add to this the care of the general health in other cases not included in the above, and the medical man has exhausted his resources in the way of prevention.

It is often easy, after the actual occurrence of an attack of insanity, to look back over the history of the case and note the causative influences which have led up to the final catastrophe, and sometimes to see how this might have been averted, if entire control of the patient could have been exercised. This is, however, in most cases impossible. The physician is overpowered by the environment of the individual The absolute necessity for support of a family, of hard grinding toil, even to the breaking down of health, the fret and worry of life, are stronger than all the advice and entreaty of the physician, who perhaps foresees the end from the beginning.

Relief is only obtained when from the open outbreak of the mental disorder the strong hand of the law steps in and consigns the unfortunate individual to the hospital provided by the kindly charity of the public. Such an array of facts leads the alienist to sympathize most heartily with the general practitioner in his difficulties in the treatment of insanity, and cements the bond of union between them more firmly.

It is to the greater confidence of the general profession in the asylums of the State that their growth and success is in a measure due. The last census report explains the increase of patients under care in asylums to the greater willingness to place them under charge, due to increased confidence in the conduct of hospitals for the insane.

The basis of this confidence is found in the improvements in the institutions, due to the promotion of the hospital idea in the treatment of the insane; to the greater individualization rendered possible by the increase of medical officers; to the change made in appointments after Civil Service examinations of both officers and attendants; to the wonderful improvement in the service brought about by the introduction of training-schools in hospitals for the insane, and to the supervision of a legally constituted Lunacy Commission. These are the steps of progress which have placed the hospitals of our State in the front rank of like charitable institutions of the world, and in all of them the State of New York took the initiative. If to these we add the restriction of mechanical restraint, the employment of patients, the improvements in construction by the introduction of hospital and infirmary wards and of nurses' homes, the greater attention to moral treatment by the varied means of entertainments, and by the use of physical culture, and lastly and most important, the general employment of night nursing, we present a condensed retrospect of the improvement in our hospitals for the insane which rightly enlists the confidence of the profession and of the community.

This confidence is shown not only in the large number

of patients committed under certificates by general practitioners, but by the interest manifested by them in the conduct of the various hospitals of the State. The very progress made by these hospitals has been rendered possible only by the support of the profession. The former barriers having been thus broken down, the alienist is brought into closer relations with his brethren in the profession. As evidencing the tendency of the times I quote a circular letter of the State Commission in Lunacy just issued.

"ALBANY, November 10, 1892.

THE CLINICAL TEACHING OF INSANITY IN PUBLIC HOSPITALS FOR THE INSANE.

To the Managers of State Hospitals: The Association of Medical Superintendents of American Institutions for the Insane, at its annual meeting, held at Toronto, Canada, in 1871, adopted the following resolutions:

"*Resolved*, That in view of the frequency of mental disorders among all classes and descriptions of people, and in recognition of the fact that the first care of nearly all these cases necessarily devolves upon physicians engaged in general practice, and this at a period when sound views of the disease and judicious modes of treatment are specially important, it is the unanimous opinion of this Association that in every school conferring medical degrees there should be delivered, by competent professors, a complete course of lectures on insanity and on medical jurisprudence, as connected with disorders of the mind.

"*Resolved*, That these lectures should be delivered before all the students attending these schools, and that no one should be allowed to graduate without as thorough an examination on these subjects as on the other branches taught in the schools.

"*Resolved*, That in connection with these lectures, whenever practicable, there should be clinical instruction, so arranged that, while giving the student practical illustrations of the different forms of insanity, and the effects of treatment, it should in no way be detrimental to the patients.

"Since the adoption of these resolutions public sentiment has become more pronounced in favor of carrying out their purpose and spirit.

"The fact that insanity is a far more frequent and more serious disease than many others, the nature and symptoms of which medical students are required to possess a practical knowledge before being permitted to graduate, renders it of the highest importance to the general public that a wider diffusion of correct knowledge of the disease and of its proper management, particularly in its early and most curable stage, should obtain among the general medical profession. This is especially important in view of the fact that in a large majority of cases the presence of the disease, in the first instance, must necessarily be determined by the general practitioner—usually the family physician.

"Citizens of the State, of all classes, could not fail of being benefited by the diffusion of a practical knowledge of the subject among the general medical profession. The recognized want of such knowledge is largely due to the fact that, with few exceptions, it is only within a comparatively recent period that this important branch of medical science has been systematically taught in medical schools. Furthermore, it is well known that but few of the schools wherein such teaching is now had are able to procure the necessary material for clinical instruction in psychiatry outside of hospitals for the insane; and inasmuch as it is only from public institutions that such material can be drawn, it would seem that no greater objection could properly be raised to the giving of such instruction, under proper restrictions, in hospitals and asylums for the insane, than to the clinical teaching of other branches of medicine in general hospitals, a practice which now extensively prevails throughout the civilized world.

"There being large numbers of patients in the public hospitals for the insane who would offer no objection to the giving of clinical instruction to students of medicine in their presence, the Commission would earnestly recommend that the Board of Managers of the several State Hospitals afford to medical colleges situated in their vicinity, as well as the practising physicians who may desire to avail themselves of the privilege, such facilities for the clinical study of mental diseases as in the judgment of the Medical Superintendent may be wise and proper.

"By the Commission.
"T. E. MCGARR, *Secretary*."

This recommendation of the Commission has its inspiration in a desire to give to the student of medicine an opportunity to enter this field of study, which until a comparatively recent time has been so much neglected by a large part of the medical world. The action of the British Medico-Psychological Association also gives a sanction to clinical instruction in hospitals for the insane which, if properly utilized, will advance education in medical schools, and place it within the power of the physician to equip himself more thoroughly for the duties and responsibilities of professional life.

In closing, we would enforce the plea for making the study of psychological medicine obligatory upon all students, and would urge upon *our* schools the necessity of adding the theoretical and clinical study of insanity to their curriculum. It is done in Great Britain; why should it not be done in America?

TWO SUCCESSFUL CASES OF SALINE INFUSION.

BY EDWIN STERNBERGER, M.D.,
LATE HOUSE SURGEON TO MOUNT SINAI HOSPITAL.

THE following cases are reported for a twofold purpose, the first and principal one being to emphasize the fact that infusion is indicated not only for great loss of blood but also for extreme shock after a major operation. The second object is to present certain factors in the technique of infusion, especially those relating to the quantity of saline solution used, its temperature, and the after-administration of strychnine as a heart-stimulant.

The cases reported were patients of Dr. Paul F. Mundé, one at the Mount Sinai Hospital, the other at his private hospital.

CASE I.—Mrs. J. F——, admitted to Mount Sinai Hospital September 30, 1892; aged forty-four; married twenty-three years; housewife. Has had two children, the last having been born sixteen years ago. Has had one abortion. With the exception of a persistent leucorrhœa for about three years, always well. Since three months, general pelvic pains and irregular menstruation. No appreciable loss of flesh or strength.

Examination.—Cervix lacerated, anterior lip the seat of extensive bleeding vegetations which the microscope confirmed to be malignant; uterus not very movable.

October 5th, 3 P.M.—Operation by Dr. Mundé; ether; vaginal hysterectomy. With difficulty uterus removed with right ovary and tube. On account of firm adhesions, left adnexa and left cornu left *in situ*. During manipulation a rent was made in rectum, admitting four fingers. Because of the awkward location of the tear in the gut considerable time, about two hours, elapsed before the continuity of the rectum was restored by catgut sutures. During all this time the patient unavoidably lost very much blood. Hypodermic stimulation was resorted to freely throughout latter part of operation. By means of this stimulation the patient temporarily rallied. At about midnight signs of collapse became apparent. From this time until infusion was done, in spite of liberal stimulation, the pulse rapidly increased in frequency and the general condition became very poor. Was seen by Dr. Mundé twenty-four hours after operation, who

directed infusion to be performed as soon as possible. Prior to the infusion pulse fluctuated from 130 to 160.

October 6th, 8 30 P.M.—Under strict antiseptic precautions the left median cephalic vein was exposed by me, a silver cannula inserted, and three pints of a six-tenth per cent. solution (about three pints ordinary table-salt to one drachm of water) injected with a glass fountain syringe suspended about four feet above level of vein. It required about twelve minutes for this amount of fluid to enter the circulation. The temperature of the solution at the beginning of the operation was 117° F. Immediately after the infusion, strychnine sulphate, gr. $\frac{1}{30}$, was given hypodermically. As the fluid was being injected an appreciable change for the better in the quality of the pulse was noted. 9 P.M.—Pulse, 120, full and rhythmical; temperature, 102 6° F. Patient's condition decidedly improved. 9.15 P.M.—Severe chill, lasting ten minutes, for which patient was given chloroform, ♏ xx., and whiskey, ℥ ss. Ordered also strychnine, gr. $\frac{1}{60}$; whiskey, ʒ ij.; caffein, gr. v., every two hours.

October 7th, 7 A.M.—During greater part of night patient nauseated and sleepless. Pulse ranged from 120 to 130; temperature, 99 to 100.8° F. 11 A.M.—Signs of collapse again appeared. Pulse, 148; temperature, 100.2° F.; respiration, 16. 5 P.M.—Was again seen by Dr. Mundé, who advised a repetition of the infusion. Free stimulation kept up until 8 P.M., when condition became extremely alarming. At this hour infusion of three pints in left median basilic vein was again done by me. Infusion followed by gr. $\frac{1}{30}$ strychnine sulphate, hypodermically administered. The same precautionary measures were taken as in the previous infusion. A half hour later patient had a chill lasting nine minutes; for this chloroform, ♏ xx., and aromatic spirits of ammonia were given. After the second infusion patient quickly rallied. Pulse remained full and strong without any intermission.

October 8th, 7 A.M.—Pulse, 108; temperature, 100° F.; respiration, 20. From this time on the patient made a speedy and uneventful recovery, the rectal rent even closing, except a small fistula into the vagina, which gradually disappeared.

Case II.—Mrs. ——, admitted to Dr. Mundé's private hospital October 6, 1892, aged thirty-eight; married twenty-two years; has three children, the youngest being seventeen years. Pelvic peritonitis after last confinement, two years ago. Menstruation regular, very profuse, accompanied with moderate amount of pain. Since seventeen years severe increasing pain in both ovarian regions, chiefly on right side. Has become more anæmic and debilitated from year to year. Palliative treatment continued for months at a time with little benefit.

Examination.—Uterus in normal position and immovable. Cervix lacerated. Both ovaries and tubes adherent. Before operation temperature normal, pulse 94, weak, and occasionally intermitting

October 14th.—Operation by Dr. Mundé at 2 P.M. Ether; laparotomy; appendages found so firmly adherent that their removal was very difficult and prolonged. Comparatively little blood lost at operation. Time of operation about forty minutes. Toward latter part of operation pulse required hypodermic stimulation. Reaction good. Patient did well for forty-eight hours, when it was thought advisable to move the bowels. For this purpose calomel, gr. j., every hour for three doses, and two doses of Rochelle salts, ʒ j., at an hour's interval, were given. Three moderate evacuations followed, after which patient complained of fatigue and drowsiness. Soon afterward patient suddenly went into collapse. Stimulation hypodermically and by rectum resorted to. A temporary rally for thirty minutes quickly followed, when the patient again became almost pulseless. Dr. Mundé having sent for me by telephone I was able to be with him within thirty minutes, and at his request proceeded to infuse as in the former case. The same technique prevailing, three pints of the six-tenths per cent. saline solution, at a temperature of 118° F., was injected in the course of fifteen minutes into the left median cephalic vein. Immediately a perceptible change in the quality and frequency of the pulse was noted.

After the infusion three hypodermics of one-sixtieth grain each of strychnine were given within one hour. A moderate chill, lasting five minutes, occurred thirty minutes after the operation. From this time on the pulse averaged about ninety, and no unusual symptoms were noticed throughout the convalescence. In this case also the rally after the infusion was most rapid and apparent to all present.

Remarks.—The foregoing cases are especially significant to the writer, for in eight previous cases in which infusion was practised for acute anæmia not one recovered. In those cases the temperature of the solution was that of the body; the quantity infused was not more than a pint and a half, and in none of the cases was strychnine used to any extent. In the present cases, the last under observation, the temperature of the solution was about 118° F.; the quantity injected was between three and three and one-half pints, and strychnine was liberally administered.

From these facts it seems justifiable to claim that, in all probability, the satisfactory results were due to the high temperature of the solution, the large quantity used, and the after-administration of strychnine.

Regarding the second case being one of shock, Dr. Mundé was firmly convinced that the collapse was not due to either primary or secondary loss of blood, but without doubt to the prostration brought on in an excessively anæmic and debilitated patient by several evacuations of the bowels. In the opinion of us both, the patient in all probability would not have rallied had not infusion been performed.

A CLINICAL STUDY OF GLANDERS IN THE HORSE,

With Special Reference to Its Manifestations upon the Mucous Tissues of the Nose, with Prophylaxis and Treatment.[1]

By W. H. DALY, M.D.,

PITTSBURG, PA.

Mr. President and Gentlemen: I have recently had an opportunity during three months to study the clinical manifestations of glanders in the horse, chiefly for the purpose of informing myself concerning the various phases of the disease in the nose and throat. Hence I undertook the supervision of the nursing, care, and treatment of the animals personally.

This may seem to have been a foolish proceeding for a man in busy nose and throat practice in the human family to have taken the pains, trouble, and risks necessary in treating horses with glanders, but in the outset allow me to say that I was impelled to undertake this study, first, because of its communicability to man, and also because of the very vagueness of the information we get from the standard text-books, and the limited knowledge that the otherwise well-informed veterinarian may have to impart concerning the subject, by reason of the comparative infrequency of glanders in this country. So that in the cases which I studied I only found two veterinary surgeons, out of six or eight whom I called in in consultation, who admitted they had already seen cases and felt themselves competent to detect and pronounce a correct diagnosis of a case of glanders.

One of the patients was a most elegant and favorite saddle-horse that I was very anxious to save from destruction, and my plea for bringing this subject before you is also the fact that our profession are not only handlers, but lovers, of this best friend of man, and are therefore liable to have the same experience that I passed

[1] Read before the Mississippi Valley Medical Association at its meeting in Cincinnati, October 12, 1892.

through, viz., of having a glandered horse and not be aware of it.

There are a few points I wish to emphasize and remind you of, viz.: in the teachings of the books, the names glanders and farcy are synonymous, also with the usual loose use of terms by the more ignorant and would-be veterinarians these names are applied to two different phases of glanders, with the implication that they are two different diseases. This much, then, ought to be understood, viz.: That form of glanders where the nasal discharge is most prominent is spoken of commonly as glanders; the term farcy is used to designate the other form, where the disease displays lumps in the line of the lymphatics, along the belly and insides of the thighs, and other parts along the neck and elsewhere, varying from the size of a hickory nut to that of a small apple, together with œdema of the legs and stiffness of the joints; later, the nodular lymphatics, or so-called farcy buds, break down and ulcerate; this form, I say, is spoken of as farcy, but it is all the same glanders, as syphilis that attacks the glands is none the less syphilis.

Another point is, the nasal discharge in glanders is not necessarily offensive, and in most of the cases I have seen not at all so. When the animals are kept as clean as possible, moreover, the nasal discharge is not necessarily purulent, but may be of a starchy character, and may be chiefly from one naris.

The disease may lurk and be masked in the system of a horse for many months, and the only significant or apparent symptom may be a slight and inodorous discharge from one naris on driving the animal.

The horse may be far advanced in the disease, and with the discharge considerable, when the amount he may blow from his nose in driving is taken into account, yet so far as his apparent activity, spirits, and appetite are concerned nothing unusual may seem wrong, other than the evidence of a slight cold, or epizootic, with concomitant or following loss of flesh.

The disease has been known to have apparently disappeared in a given animal, *i.e.*, the usual discharge to disappear, flesh return, nodular lymphatics or farcy buds to disappear by absorption, and later, from overwork or exposure to cold, the disease may return and pursue a fatal course.

That glanders is highly contagious, both to horses and the human being, there can be no doubt; yet in the stable of a friend, some time ago, two carriage horses were affected with glanders, while a third horse, that occupied a stall between the diseased horses and was in constant touch with them and drinking from the same buckets, was not affected, and is yet in good health. The glandered horses were destroyed.

While inspecting the nares of one of my equine patients, after using the nasal douche on him, I had on two occasions the misfortune to receive some of the mucus blown by the horse from his nares into my eyes and about my face. A careful washing and disinfection was at once resorted to, without any further untoward event following.

I give these points as of some practical value, to counteract the vague and foolish terror that is inspired by the very name or suspected existence of glanders.

Now let me give you a clinical picture of one patient, a typical case.

Horse (Colonel) twelve years old, fifteen hands high, weight probably eleven hundred pounds, dark brown, cob build, very high spirited, and of high intelligence and breeding—an animal of rare qualities and great endurance. This horse had for some months a short hacking cough, that I jocularly denominated an old man's cough. He also had for several months a starchy discharge from one naris after being driven.

About January, 1892, we had an endemic of la grippe in the human population of Pittsburg, but there was no unusual amount of sickness among horses. This patient was not in good condition, however, and was losing flesh, but was spirited and active. One cold day in January, I rode him under saddle to the West Penn Hospital and back, a distance of six miles. The horse was spirited and anxious to go, and I indulged him, bringing him back rather warm, and instead of rubbing him dry, as I directed, the groom let him stand in a draught, while he turned the hose on his legs to wash the mud off, and then put him in his stall without a blanket, and without rubbing his legs dry. The next day the horse seemed excited and nervous, but not otherwise the worse for his ill care and treatment. A few days later he exhibited further evidence of cold; nose running copiously, cough, fever, pulse sixty, and limbs stiff. On examination there were revealed a few small lymphatic nodules along the belly in two direct lines backward from his forelegs; also some nodules along the crease in the neck above the windpipe. Yet the horse ate well and seemed to have usual good spirits; the nasal discharge was inodorous, but copious from the left naris, the mucous membrane of which was swollen, turgid, and of a dark pink hue, but there were no chancres on it; the mucous was now tinged with blood. This was about the eighth day after the severe ride and the maltreatment by means of the cold water and exposure.

The medical treatment at this time consisted of hot bran-mashes, with saltpetre, quinine, carbonate of ammonia internally; antiseptic nasal douche, followed by iodoform insufflations twice daily. There was little change in this condition for six weeks, when the legs began to be œdematous, and there was lameness, especially in the left hind leg, which was increased to twice the natural size by œdema. The farcy buds were now firm and hard, and as large as walnuts along the belly line and the nasal mucous membrane was swollen, and small, punched-out, chancre-like sores appeared in the left naris; the discharge was lumpy and thick, but inodorous, though very considerable, and the box stall was spattered all about each morning with bloody mucus of a gelatinous character, and very elastic and adherent to whatever it attached itself.

A few days later after the douche there was a copious and alarming hemorrhage of venous blood, which was arrested by elevating and tying the patient's head high up. In a week later the chancrous sores in the left naris were more numerous and quite characteristic of glanders; in fact, all the salient features of the disease were now present in undoubted character. The patient's appetite was normal, and the spirits were fair, though the emaciation was pitiful to behold. There was some arrest of the urinary secretion for a day or two, which was restored by the exhibition of rosin and saltpetre. The administration of arsenic, quinine, and iron was substituted for the other medicines, the cough and fever having abated; the copious nasal hemorrhage had occurred several times in the past week; once the amount was over two quarts, and was only arrested by a hot solution of alum, used as nasal douche.

Several of the lymphatics in the throat and neck were now in the eighth week about the size of small apples, hard and well defined but not tender to pressure; the left nostril was enormously swollen, and studded with glanderous chancres that had sharp edges, and gray bottoms resembling the true chancre as seen in primary syphilis; there was no odor that could be considered offensive, but the patient was kept as clean as possible, and great care was observed in every way.

I now gave arsenic, iron, and quinine in large doses, estimated as though I was treating a twelve or thirteen hundred pound man, and after a week further, there was an abatement of the naso-pharyngeal symptoms, and the discharge became more distinctly purulent; the animal seemed better, and his coat, which had never stared or become rough but merely dull, looked better and somewhat glossy; his eyes, which for a few days previously were listless, were brighter.

Now, having had a full and very complete opportunity

to study the disease in all its phases, so as to be able to recognize it again, even in its earlier stages. I decided, although the animal was now improving, to destroy him, as I was obliged to absent myself from home, and there was rumored danger of the authorities proceeding against me. I accordingly had the horse shot. The post-mortem revealed extensive chancres of the nasal mucous membrane, from the size of a ten cent piece to the size of a silver dollar; the bones of the nose were denuded, and yet, at the bottom of several of the chancres repair had already begun on the edges of some of the sores. From a commercial standpoint it was folly to pursue the cure of this case further, and from a scientific and clinical standpoint I had obtained what I had sought, and further time could not be spared to endeavor to cure an animal that had already nearly reached the limits of usefulness in age.

Now as to prophylaxis. Complete isolation should always be resorted to, and if it is summer, the patient is better in an out enclosure or box-stall completely isolated.

For disinfection of premises after glanders, if the structure is too valuable to burn, first scrape all the wood where discharges have been lodged by being blown from the patient's nose; burn these, then wash all down with a rough broom and a solution of sulphate of iron (two pounds to one-half gallon of water). After this close the place tightly and burn sulphur in it for several hours. After this whitewash with a solution of fresh burnt lime, with a pint of crude carbolic acid, and a pound of sulphate of iron to the gallon of wash, flushing all crevices and corners. If this is done thoroughly there will be little or no danger to animals who occupy the premises subsequently.

Soak the blankets, if valuable, in a solution of corrosive sublimate, 1 to 500 and afterward wash and boil them. Curry-combs, brushes, and other tools should be scrubbed in hot water and soaked in a solution of corrosive sublimate 1 to 500. Harness can be washed in rather warm water, then rinsed in a sublimate solution and afterward rinsed in clear water and cleaned with a carbolic or mercury soap for a few times; care should be taken to eliminate from all the corners about the buckles and keepers any dandruff from the diseased animal.

The all-important question in glanders is to be able to recognize the early manifestations of the disease. This is exceedingly difficult, as the conditions are so masked, but from my observation I should say, where an animal has certainly been exposed to contagion take the best of care of him in every way, and observe the strictest cleanliness, and if later on you observe a persistent but very slight discharge from one or both nares, and some even slight lymphatic nodules along the belly-line of lymphatics, from the size of a coffee-grain to a hickory-nut, these are the so called "farcy buds," which when once felt can never be mistaken. If there is in addition a slight fever, put your horse on good alterative tonics and isolate him, but do not ruthlessly destroy him.

As an experiment I exposed a young horse to the contagion, and at a time when he was suffering from colt distemper. The glanderous disease went on to development of farcy buds, slight nasal discharge, and temporary loss of appetite. These symptoms under the above alterative treatment all disappeared in less than two months, and the horse was in an improved condition[1] and although he is now receiving no treatment is, beyond doubt in my mind, safely in a sure convalescence, barring no accidents that will deteriorate his general health.

As to character of the disease I am of the opinion it is of a specific character, that is, contagious through its peculiar bacillus malleis, and that it is to a certain unascertained degree curable if taken early and properly isolated.

But I repeat herein lies the difficulty, viz., an early recognition of the disease. I would not by any means advise the purchase of a horse who upon a little active exercise runs a little starchy mucus from the naris or nares and has some hard nodular kernels like a pea or chestnut in the cellular tissues under the skin along the belly in a line with the forelegs; these are among the earliest objective constitutional symptoms, and I regret to say when present are often so masked as to escape notice of any other than an expert observer.

This, gentlemen, is a clinical picture of glanders as I have personally observed it, and without regard to the teaching of the books, and I have given it to you, hoping that it may interest you not only in preventing the disease in those noblest of the lower animals, but also in the human being, who is so liable to be attacked by means to contagion.

Glanders has been very prevalent in London for the past four or five months, and the subject has attracted much merited attention from the medical profession of England, notably Mr. Ernest Hart, of the *British Medical Journal*, who has from time to time had much to say in a general way on this subject, but nothing that would help one to recognize a case of the disease. In the last number of the *British Medical Journal* which has come to hand, viz., September 24, 1892, there is a lengthy editorial, entitled "Mallein, the New Diagnostic for Glanders," some of which is well worth quoting.

"Koch's discovery of tuberculin, and its employment in the diagnosis of tuberculosis, awakened in the mind of Dr. Kalning, of the Bacteriological Laboratory of Dorpat, in European Russia, the idea of employing in a similar way a product of the bacillus mallei of glanders for the diagnosis of glanders and farcy in suspicious cases. If this could be accomplished a vast step would at once be made toward a mastery over the disease. This welcome news was, however, shortly followed by the melancholy addendum that Dr. Kalning, the discoverer of the preparation, had contracted the disease himself, and had died a martyr to science.

"Dr. Kalning's mode of preparation of the extract was as follows: He took five grammes of a pure culture of bacillus mallei, added to it twenty cubic centimetres of sterilized distilled water, and placed the mixture in the thermostat at 120° C for twenty minutes. He repeated this heating process four times in forty-eight hours, and then left the mixture another forty eight hours in the thermostat at 39° C. His next step was to filter the mixture through a porcelain filter under pressure; thus he obtained twelve cubic centimetres of a clear yellow liquid, which was again exposed for fifteen minutes to a temperature of 20° C. in the thermostat. This liquid was used for a subcutaneous injection in the horse, one cubic centimetre being used for each animal. Of five horses injected, two were sound, two were manifestly glandered, a fifth was inoculated with glanders at the same time the subcutaneons injection was made. During the next twenty-four hours the injection caused no noteworthy rise of temperature in the two sound horses, but in the other three the temperature rose in the first thirteen hours from 38.5°, 38.0°, 38.6°, to 40.5°, 40.7°, and 41.3° C. Post-mortem examination of these three horses left no doubt of all of them being really glandered.

"In a similar way to that of the unfortunate Kalning, but independently of him, Dr. Preusse, veterinary surgeon at Dantzic, attempted the preparation of an extract of the glanders bacillus. Preusse used for the purpose old dried-up cultures of the bacillus mallei, grown on potatoes. These he steeped for several days in a mixture of water and glycerine at a temperature of the body, 38° C. The extract he filtered several times and sterilized in the steam-bath. It was finally an imperfectly clear, dark yellow, oily liquid of neutral or faintly acid reaction, possessing a characteristic odor. Preusse tried the action of this first of all on guinea-pigs which he had inoculated with glanders. Later in the year he tried it on six horses belonging to certain large stables in which glanders had just previously broken out; none of the six horses, how-

[1] Three months later this young horse is in fine condition and, so far as I can discover, in perfect health.

ever, showed any unequivocal signs of the disease at the time of his experiments.

The result of the trial on the horses was most striking, in five of them a considerable increase of temperature occurred, the maximum being attained about fifteen hours after the first injection, about eight hours after the second; the rise amounted to as much as 2.2° C. In the case of the sixth horse—a young foal—a rise of temperature amounting only to 0.5° C. ensued seven hours after the first injection, and no perceptible rise at all followed the second. The first five horses on the following day showed lassitude; the foal was as well as it had been previously. Post-mortem examination was made in all six horses twenty-four hours later. Unmistakable evidence of glanders was discovered in the first five horses, but not in the young foal. The next trial was made on a horse known to be sound; it was inoculated on three different occasions with the extract of bacillus mallei, and each time the temperature remained within the limits of health for forty-two hours following the injection. In a horse which had shown manifestations of the disease the rectal temperature rose 1.5° C. nine hours after the first injection, and more than 2° C. after the second. Similar investigations and experiments had been going on at the Military Veterinary School at Berlin, by Dr. Pearson, and Dr. Preusse's mallein observations have been repeated by Hayne, Schilling, Peters and Felische, Dieckerhoff and Lothes, and by Walter, in all sixty-four horses, with results the same as above detailed. More recently Professor Nocard, of Paris, has tested mallein on omnibus horses at the Pasteur Institute with encouraging results. At the present time the extract of mallein is being tested in London, at the Brown Veterinary Institute, by Professor Sherington, and while the results have not been so satisfactory as those reported from Dantzic, yet the number of cases so far have been insufficient upon which to fix judgment.

GROUND ITCH.

By F. PEYRE PORCHER, M.D.,
CHARLESTON, S. C.

A DISEASE so often met with deserves, at least, to be described and named. We can find no reference to it in the works on practice, on skin diseases, in encyclopædic hand-books, or the "Index Catalogue" of the Surgeon-General's office; yet there is scarcely a boy raised in the coast districts of South Carolina who has not been a sufferer from this affection.

As it involves invariably one or more of the toes, seldom extending beyond them, and possesses the characteristics of eczema, there need be no difficulty in giving it its correct scientific designation. We would suggest the compound name, Eczema phalangis pedis.

Cause.—It is generally found in those going without shoes, and is popularly ascribed to walking bare foot in the sand and wet grass; and therefore generally affects boys.

It is met with extensively along the seaboard, in the pineland residences, and elsewhere, also on Sullivan's, Pawley's, and other islands; and in these localities are found certain grasses armed with spines or prickles which are highly irritating, and these may give origin to the disease, though no complaints are made of them. Those of cleanly habits are not exempt from the disease.

Symptoms.—There may be at first moderate redness or subacute inflammation, followed by papules or vesicles which burst. This is accompanied by intense itching and burning, only partially relieved by scratching; the result—a sore with whitish ulceration around and between the toes, with a moisture characteristic of eczema. There is no rash, fever, or chill; no extreme swelling or sloughing.

It is analogous with an affection known as stone bruise, quite common in the upper and more rocky districts.

The disease we are describing is neither camp nor prairie itch, or embraced under any of their synonyms, which are all contagious and generalized over the whole surface of the body; whereas ground itch is strictly localized and never contagious.

A correspondent who is a high authority in dermatology suggests that "it is possible that it may be due to the attack of the pulex penetrans (sand-flea or jigger). This attacks the neighborhood of the toes, but is not commonly met with outside of tropical countries, although it has been reported from time to time as met with in the Southern States. Even though it be an eczema it must, from your note, have peculiar features." We are inclined to dissent strongly from this opinion, though we have heard the affection ascribed to some minute insect. Were the pulex the cause, it would be more readily recognized, for the female, which is generally regarded as a true flea, penetrates the thin skin between the toes or about the toe-nails, and then swells up to the size of a pea, forming a bag of eggs, and thus becomes plainly visible; this causes much irritation, which often results in suppuration followed by open ulcers.

Treatment.—There are many popular remedies, as, for example, bread-and-milk poultices in the early stages; soaking the feet in hot water is said to arrest the disease, though we doubt this; applications of the leaves of the gourd or calabash (*Cucurbita lagenaria*), heated; a hot decoction of the yellow gerardia (*Gerardia flava*), which grows abundantly here, and is considered a sovereign remedy. We have found the application of a powder of aristol, bismuth, and oxide of zinc, equal parts, also campho-phenigin and oil or vaseline, equal parts, give great relief; and have seen benefit also from an ointment given us by the late Dr. V. Mott, of New York, for eczematous affections, viz.:

℞ White precipitate of mercury..... ʒ j.
Oil of tobacco..... gtt. x.
Lard..... ʒ j.

Iodoform in the moist stage is a useful application, and a strong solution of soda, frequently applied, relieves the itching temporarily.

When the suppuration is subsiding, any drying powder, such as calamine, subnitrate of bismuth, oxide of zinc, or powdered cinchona bark will prove useful. A medical friend finds equal parts of ichthyol and cosmolene the most efficient remedy. Carbolic acid is sometimes employed as an ointment.

The disease is often very refractory, the itching and burning being very severe. A patient, under constant supervision, is now in the sixth week of the disease.

Adenoid Growth in the Pharynx.—Dr. W. P. Northrup states that he frequently removed these growths with the nail. A spool is placed between the teeth and held with one hand, and the arm of that hand holds the head of the child against the operator's side, while the index-finger of the other hand readily removes the spongy growth in the vault. The results were so satisfactory that it surprised him that the method was not more generally approved of by laryngologists. The pain was slight, and apprehension of an operation was avoided. Protruding tonsils, when not actually inflamed, should be removed as completely as possible. The vault of the pharynx should be investigated in every case of deafness or chronic otorrhœa. A surprising improvement often followed a simple operation in these deaf, stupid mouth breathers. Not only was the hearing improved, but mental brightness was often restored. The condition was one that the general practitioner could discover, and in many cases remove with most satisfactory results.

A Memorial to Scheele, the great Swedish chemist, was unveiled at Stockholm on December 9th, the one hundred and fiftieth anniversary of his birth. Professor Nordenskjöld has collected a number of Scheele's letters and manuscripts, which will shortly be published.

TREATMENT OF SUPPURATING BUBO.

By ORVILLE HORWITZ, B.S., M.D.,

LECTURER ON GENITO-URINARY AND VENEREAL DISEASES IN THE SPRING COURSE AND DEMONSTRATOR OF SURGERY IN THE JEFFERSON MEDICAL COLLEGE; SURGEON TO THE PHILADELPHIA HOSPITAL.

HAVING within the past five years attended 704 cases of suppurating bubo, of which number 54 were under treatment at the Philadelphia Hospital, 603 at the Jefferson College Hospital, and 47 in my own private practice, I have had a somewhat extended opportunity to observe results, and have arrived at conclusions more or less differing from the usually received views of standard authorities.

I have observed that buboes due to chancroidal poison always suppurate; any attempt at abortive treatment is useless. The so-called sympathetic bubo due to gonorrhœa undergoes resolution in nine cases out of ten. When due to inflammatory and tuberculous causes the outlook for cure without suppuration is favorable. About one case in sixty is due to syphilis suppuratio, the patient being either broken in health, very anæmic, or of tuberculous diathesis.

Most authorities advise that the bubo be opened as soon as fluctuation, which indicates suppuration, is observed. Experience has taught me that this is a mistake; the operation should be postponed as long as possible.

If the bubo be not opened the patient will no doubt suffer more pain for a day or so, but he will, in most cases, be saved from an extensive dissection of the diseased glands. Suppuration takes place primarily around the gland, which soon becomes softened and broken down; by waiting a few days nature loosens the gland so that it is easily removed. Should the gland itself become disintegrated by the suppurative process it is readily and safely removed by means of the curette. If, however, the patient is early operated upon the gland will be found very adherent, owing to periadenitis, when dissection, to facilitate its removal, is not only difficult but is sometimes not free from danger. I have seen two cases in the out-wards of the Philadelphia Hospital, where the patients have been rendered hopeless invalids by the surgeon having torn the femoral vein while attempting to remove the adherent glands.

Nor is it necessary, as is generally taught, to remove every particle of the diseased gland when suppuration has taken place. Abundant experience has taught me that only the body of the gland should be cut away, leaving the trabecula, which is always very adherent and difficult to remove. The wound should be wiped with pure carbolic acid, after which it will soon present a healthy granulating surface, filling up in a short time.

The text books teach that in operating an incision should either be made parallel to the long axis of the body, or that the abscess should be opened parallel to Poupart's ligament. I believe that both these methods are wrong. The incision should be made through the entire length of the long axis of the swelling, without reference to the body, the pus should then be evacuated and the cavity washed out with a solution of 1 to 1,000 of bichloride of mercury. The upper flap resulting from the incision should then be grasped at each end with the hæmostatic forceps, and by means of a pair of curved scissors the flap should be cut away; the lower flap should be similarly treated; the whole of the skin overlying the abscess should be removed.

If an examination is made of the skin that has been removed, it will be found that its under surface is covered with a plastic lymph, together with anæmic granulation tissue, which is not only infiltrated by the microbes of suppuration, but in cases of specific origin with specific micro organisms as well, making a double infection.

It is obviously impossible to disinfect these surfaces, hence, if the course laid down by the books be followed, in most cases a sinus will be the result, which will not only require a long time to heal, but will frequently necessitate the performance of one or more operations before a cure can be effected.

By operating by the open method not only is the infected skin removed, but the operator has the great advantage of being enabled to inspect the condition of affairs underneath, and thus to come to a definite conclusion as to the further treatment: in addition to this the wound can be thoroughly disinfected. Should the removal of any diseased gland be necessary the surgeon has a clear field in which to perform the dissection, and at the same time runs much less risk of wounding important structures in the neighborhood.

Cases operated upon in the manner here described granulate in about three weeks, leaving a smooth, flat scar, scarcely perceptible, while, on the other hand, the old method leaves a thick, indurated, uneven, discolored ridge of nodular tissue which the patient carries with him during the remainder of his life.

The after-treatment consists in washing the wound with a 1 to 1,000 solution of corrosive sublimate, drying it thoroughly, and then applying to the whole surface, by means of a bit of cotton, pure carbolic acid. The surface should then be dusted with iodoform and packed with the bichloride gauze, the dressing being daily changed until the wound is healed.

The method here described results in a speedy cure, and involves but one operation. Should it become necessary to remove the glands, the operator, by the process here advocated, can readily make his dissection with the entire surface in sight, and hence will run less risk of injuring important structures.

When the operation is completed it is not necessary to confine the patient to his bed, unless, indeed, there has been an extensive removal of the involved gland. Persons operated upon at the Jefferson Hospital are very rarely confined to the wards; they generally return to their occupations in a day or so, merely coming to the out patient department to have their wounds dressed.

INTERMITTENT FEVER IN SOUTHWEST AFRICA.

By L. L. VON WEDEKIND, M.D.,

U. S. NAVY.

WITH every expectation of being called upon to treat a large number of cases of African fever, we fitted out the U. S. S. Pensacola with an unusual supply of quinine, Warburg's tincture, and arsenic, when ordered to take the eclipse party of 1889 to St. Paul de Loando, West Africa.

Everything that could be used in the treatment of these cases was supplied by Surgeon General J. Mills Browne, U. S. Navy, even to an excellent microscope for my use, "to examine the viscera of the fever patients who may die," as I informed the Bureau when applying for it.

For the microscope I have had but little use, and we returned to the United States with almost as large a stock of drugs as when we left; visions of an interesting paper on African fevers have flown, and I have to report but five. These are, however, typical cases of one kind, and the intensity of the fever demonstrates conclusively that an African life is not a happy one.

On December 7th we arrived at St. Paul de Loando from New York, stopping on the way at Freetown, and Cape Coast Castle, and Elmina, on the Gold Coast. At these places we were told of the great amount of fever, of its terrible strength and fatality, and the absolute certainty of its attacking strangers. St. Paul was, according to some, the most "fatal spot on the West Coast."

With what we heard before leaving the United States, and this more than conclusive evidence delivered almost on the spot, we were rightly preparing ourselves for a strong fight with this dreaded monster of the dark continent. He came after three weeks of waiting, and though he saw us through five pairs of eyes, we conquered, and it was not very much of a fight

Though it is asserted by some that the period of incubation is at most two weeks, the cases here reported developed symptoms on the twenty-first day ashore. These men went into the interior from one hundred to one hundred and twenty-five miles, lived in huts, ate ship's provisions, and for a time drank ship's water. They were out in the heat of the day, and frequently at night, sometimes while hunting, being free from overhead covering all night long, and occasionally, when hunting hippopotami, wading up to the hips through swamps. Their appetite was excellent, they felt well, and enjoyed thoroughly their time ashore. For two days two of the party were ill with headache, but this amounted to but little.

Upon their return to the ship after being ashore for three weeks to the day, first one and then another went "on the list" with intermittent fever, but this differing from an ordinary attack by the complete absence of the first and an abortive attempt at the third stage. There was no doubt, however, regarding the second stage.

Question as closely as we might, no history of the chill, or even chilly sensation, could be obtained. They simply reported, "Doctor, I think I have the fever," and the thermometer would register 105°, 106°, 107° F., as the case might be, and we would answer with a ring of absolute conviction in our voice, "My man, you think correctly, you have a fever."

The first stage was in each case present to this extent: There was headache, and a tired and sleepy feeling. The temperature reached its height about the middle of the second stage, judging this stage to have begun when the patient first noticed his being abnormally hot. This period would last about five hours, the height of the temperature being reached about the end of the second hour. Following this each case exhibited a slight perspiration, but really little more than a moisture of the skin. The headache during the fever was severe, and delirium present in one case. All were of the tertian type, and in two apyrexia during the interval was complete, while in the rest fever was present to a greater or less degree until convalescence was established. Each case answered rapidly to medication, and after three attacks were convalescent, treatment in diminished doses being continued for some time.

As far as I was able to ascertain from the medical gentlemen at St. Paul, the continued action of a malarial poison upon the system does not blunt its susceptibility to fresh attacks, as each man, woman, and child is affected three, four, or five times annually, and each attack is destitute of anything new, and as equally rich in having lost nothing of the first attack.

The English as Medicine-Takers.—Statisticians have proved beyond dispute that the average of human life in this country at the present time is longer than it has ever been. Whether this be due to the quality of patent medicines which the inhabitants of Great Britain now swallow, as compared with their ancestors, is a question to which qualified medical practitioners would have no hesitation in giving a decided answer; but the fact remains that at this moment Englishmen are taking these Government-stamped nostrums in a manner to make the rest of the world wonder. During the past year the revenue derived from the three-halfpenny stamp placed upon patent medicines amounted to £240.062, an increase of £14.361 over the sum paid in the previous twelve months. The quantity of pills, lotions, powders, and ointments represented by these figures must be something enormous. Licenses for the sale of these compounds have also increased by 1,340 in England and 111 in Scotland, from which the revenue benefits to the extent of £7,188. The total income derived by state from the patent medicines is thus £247,250.—*London Telegraph.*

Dr. John Charles Steele, the Medical Superintendent of Guy's Hospital, died in that institution recently, at the age of seventy-one years.

A CASE OF EVERSION OF THE VENTRICLES OF THE LARYNX, WITH A NEW METHOD OF TREATMENT.

By WALTER F. CHAPPELL, M.D., M.R.C.S. Eng.,
NEW YORK.

Writers are agreed that this condition is one of considerable rarity. The cause, appearances, and symptoms have been so well described by others who have reported cases that it seems useless to again refer to them.

Mrs. S——, aged forty-eight years, of good family history, was admitted to the Throat Department of the Manhattan Eye and Ear Hospital in May, 1890.

She married when twenty-five years old and gave a very pronounced syphilitic history. This was contracted from her husband and manifested itself not only in constitutional symptoms but also in the children.

Four years before she came to the hospital she developed a cough which came on about twelve o'clock every night and continued until 2 A.M. It was violent, dry and spasmodic in character and accompanied by severe headache. Six months later she became slightly hoarse in the morning. The night-cough and hoarseness had continued for two years, when, during an unusually severe paroxysm of coughing, she felt something give way in her throat. Her voice at once became very hoarse and her breathing much labored. Following this attack the respiration remained labored at all times, but she had attacks of a spasmodic character when suffocation seemed imminent. Cold, excitement, or over-exertion brought on these paroxysms and nothing gave immediate relief. This state of affairs continued until she came to the hospital. Her physical condition was very good but her respiration was so labored that she could walk but a few steps and then only with assistance. Laryngoscopic examination revealed complete eversion of both ventricles. They overlapped one another in part and during inspiration a valvular action was produced which allowed only the smallest quantity of air to pass; expiration was undisturbed. The free margins of the prolapsed ventricles were very thin and flapped back and forth in the current of air. The surrounding tissues had a puffy appearance, otherwise they seemed healthy. Pain and tenderness were absent. Dry, wheezing râles extended over the chest and she complained of an oppressed, aching feeling under the sternum.

Dr. A. H. Smith was called in consultation and advised intubation. A large-sized O'Dwyer's metal tube was introduced without difficulty and the breathing was at once relieved. Immediately following the introduction of the tube the patient complained of a severe pain in the frontal region, which extended backward over the centre of the head to the occiput. This increased in severity till at the end of four days the tube had to be removed. Twenty-four hours later a lighter tube was placed in the larynx and remained three days, when the frontal pain returned. Several further attempts were made with the tube, but it had to be abandoned on account of the pain occasioned by its use.

The presence of the tube in the larynx for about seven days had produced considerable absorption of the surrounding tissues and breathing continued fairly good for some seven or eight days. The rima glottidis then began to contract again and the labored breathing returned. An attempt at removal of the everted ventricles was then determined upon. An instrument for this purpose was made, under the direction of Dr. Smith and myself, by Mr. W. F. Ford, of this city. It is guillotine in pattern, as shown in the plate, and fits into Schroetter's handle. It is curved to pass into the larynx. The laryngeal end is expanded to act as a shield to the knife and takes its shape. The knife when in position curves outward in its antero-posterior diameter.

After spraying the parts with cocaine the instrument was passed down to the everted ventricles and the knife unsheathed and the convex surface pressed against the

part to be removed. The everted mucous membrane fell into the oval knife and was easily cut away by drawing the knife into the shield. This operation was performed on both sides and immediately relieved the breathing. The hoarseness also improved, and at the end of a month the patient left our care seemingly on a fair way to recovery. Six months later she was brought to the hospital suffering from difficult respiration. There was no time for examination and tracheotomy was attempted but the patient died before it was completed.

A post-mortem examination revealed a large mass occupying the right vocal cord and general thickening of the surrounding tissue. The microscope proved the case to be one of cancer.

The laryngeal guillotine described was very useful in a case of bilateral paralysis of the vocal cords under my charge. A portion of both cords was removed by this instrument and gave immediate relief to the very difficult respirations. Further experience, I feel sure, will prove this method to be of considerable service in some cases.

Progress of Medical Science.

The Micro-organism of Soft Chancre.—An editorial published in the *Boston Medical and Surgical Journal*, contains the following résumé of the present state of our knowledge on this subject: "Unna declares that, although the etiology of the so-called soft chancre is not clear, its identity with the initial lesion of syphilis is no longer debated, and everyone is convinced that it has a specific organism, which will be isolated and cultivated. The only work upon this subject that claims attention is that of Ducrey, who in 1889, described a bacillus which he had observed in great numbers in the secretion of chancres, produced extra-genitally by inoculation. He did not, however, succeed in obtaining a pure culture, nor did he find its presence constant. Unna has found in five successive cases, in which there could be no doubt as to the diagnosis, a bacillus in excised lesions which he regards as most probably the bacillus of the soft chancre. This he found by a special method, namely, that employed by him for plasma and mast-cells, and for the bacteria of horny tissue. The sections, after hardening in alcohol, are stained with strongly alkaline methyline blue, and decolorized by a mixture of glycerine and ether, or styron. Sections thus stained exhibit the whole outer zone of the lesion filled with these bacilli, and these alone. In form this bacillus is small and short The ends are not rounded. Its chief characteristic is its growth in the tissue in the form of chains. The chains are seen in the lymph-channels, and between the tissue-cells, never in the latter, nor in leucocytes. They are found most abundantly in the necro-biotic tissue, and penetrate but a short distance beyond its edges. No other micro organisms can be detected by this or any other method. The question then arises, whether this bacillus is present only in soft chancre, or whether it can be found in other similar affections, notably in ulcerating processes. A large number of initial syphilitic lesions, an herpes ulcer, syphilitic secondary and late ulcerations, an ordinary ulcer of the leg, impetigo, and ecthyma ulcers, were examined, without the discovery of a trace of this bacillus. Soft chancres, which were taking on a syphilitic character, which had shown for some time exuberant granulations, and one that had been treated with dermatol, gave negative results. Hence untreated, young and fresh chancres should be selected for verifying Unna's discovery. The question whether this is the same bacillus that was described by Ducrey, should be left for the latter's decision. The writer enumerates the following points, as supporting his view of the causative character of these bacilli: 1. It was found in all the fresh typical cases of soft chancre in very great numbers. 2. It forms in these cases pure cultures in the tissue. Other organisms were found only occasionally, and on the surface. 3. It was found in the tissue of the lesion. 4. It was not present in other forms of ulcer, so far as examined. 5. It offers certain peculiarities that distinguish it from other known organisms which are found in ulcers.

R. Krefting, of Christiania, without knowledge of the work of Unna, publishes the results of his experiments, which are confirmatory of those of Ducrey. The work was begun before he had seen the article of Ducrey, and his methods were practically the same. His investigations were conducted on fourteen public and nine private patients, and consisted in inoculating the secretion from the original ulcers in different places, and in many generations, upon the respective patients. In most of the patients the inoculation pustules were continued to the seventh and eighth generations, each time with three punctures. The secretion of the pustules was examined by cover glass preparations stained with a solution of methyline blue with the addition of borax. It was considered useless to examine microscopically the secretion of the open chancre ulcers, on account of the admixture of so many other organisms. Short, thick bacilli were found in all the preparations from the pustular secretion, with rounded ends, and oftentimes a depression in the middle. They were partly in groups of five or six in the protoplasm around the nucleus, partly occurred singly in the protoplasm. The impression was made that they had a special relationship to the pus-cells. The bacilli were found in greater numbers in the case of the private patients, which was probably due to the fact that the latter presented themselves with newer, fresher lesions. Successful inoculations were also made from the secretions of buboes, and the same bacilli found in the secretions of the pustules. Inoculations from the secretions of primary syphilitic lesions failed to produce these bacilli. They may be stained by means of fuchsine and methyl-violet, but are best seen when methylene blue and borax are used. They are easily decolorized by alcohol and dilute acetic acid. Attempts were made to cultivate the bacilli on agar, gelatine, and in urine and bouillon, but without success, and these failures are acknowledged to make a great gap in the chain of evidence of the pathological significance of their appearance. The writer regards it as doubtful if they can be cultivated on artificial media, as they are almost invariably found in the cell protoplasm and perhaps demand a living cell for their existence. His conclusions are: 1. The bacilli are continually found in inoculation pustules, which are derived from soft chancres; usually without contamination. 2. These bacilli cannot be cultivated in the usual culture media. 3. They may be detected in the pus of virulent buboes, and in pustules formed from the inoculation of this pus. 4. They are not found in the pus from non virulent buboes. 5. The proof of their pathogenic nature cannot be carried farther until a pure culture is obtained. The presence of the bacilli in the inoculation pustules without contamination with other organisms, has almost the value of a pure culture.

American Childhood.—The disadvantages under which children, especially in our cities, are placed, in being surrounded by artificial instead of natural conditions, are discussed in a recent paper by Dr. H. L. Taylor. The city children get too little light and air, do not take enough of the right kind of exercise, are often overfed or underfed, or pushed or hampered too much in their studies, and especially in their emotions. There is a precocity in knowledge of people and social relations darkest ignorance with regard to most natural objects and processes. In diet the city-fed child often fares better than the country one, but in regard to fresh air he is not nearly so fortunate, and as he gets older the difficulty

is increased.' The city child is hampered in his movements, and at the same time subject to streams of auditory, visual, and other impressions in unending succession. His co-ordination is less perfect, although his wits are brighter than those of the country child. The city child loses much in not obtaining an early knowledge of nature. A child to grow up naturally should have a fair share of wholesome neglect and judicious exposure. A child delights to make himself useful, and it is cruelty to deprive him of this pleasure and stimulus. A boy is better for having a carpenter's bench, and a girl for doing a portion of the housework. The physician is often hampered because his patient has not acquired the art of obedience, or because he cannot tolerate a tongue depressor, or swallow a pill, or be left alone, or sit still, or take in certain classes of facts or ideas. These and similar peculiarities can usually be prevented with a little care, or overcome by proper training. They are often the result of carelessness or over-indulgence. Children of the poor in our cities fare better in some respects than those of the well-to-do, owing largely to their greater liberty. The author believes that the physique of children now growing up is not on the whole satisfactory, and that it is a difficult matter to bring up wholesome, hardy children in New York. It is true that the advantages are not all on the side of country life; but in most respects, for children, country life is more favorable.—*Boston Medical and Surgical Journal.*

A Case of Three Ureters.—Dr. Baumm describes a case of this rare anomaly. It was that of a girl, aged eighteen, who had suffered all her life from incontinence of urine. A careful examination showed a minute opening to the right near the mouth of the urethra, from which urine flowed. By the passage of a sound it was demonstrated that this was the opening of an ureter, and that it had no direct connection with the bladder. An interesting question to be decided was whether this was the ureter belonging to the right kidney, or if it was a third, starting as well as the normal ureter from the kidney or formed by a division of it somewhere in its course. The amount of urine secreted from this abdominal opening was two hundred grammes in twenty four hours, while eleven hundred were emptied from the bladder, which rendered it probable that this did not represent the whole secretion from the right kidney. Temporarily stopping the flow from the supplementary ureter was followed by severe pain, demonstrating that in all probability it started from the kidney or near to it. At the time of the operation the openings of the two ureters were seen in their normal position, thus proving that this was a third ureter. The operation was performed by opening the bladder over the pubes, excising a portion of the bladder wall over the aberrant ureter, which at one point was sacculated, and stitching its circumference with fine silk, then occluding the vaginal end with a suture. The result as regards the relief to the incontinence was satisfactory, though a ventral hernia resulted at the seat of operation. Dr. Baumm considers this a case of failure of the Wolffian canal to become completely obliterated, and looks upon it as a proof that these canals open near the mouth of the urethra, a fact which has been demonstrated in the case of the cow.—*The Boston Medical and Surgical Journal.*

White Stools.—The fact of persistent white stools being passed when the patient is on a mixed diet, raises the question whether colorless motions necessarily imply absence of bile. Dr. Walker has shown that when the pancreatic duct is obstructed white stools result, and argues therefrom that the pancreatic secretion is a necessary ingredient of the coloring matters of the fæces. In the only necropsy of a case of psilosis which has been reported, the liver, pancreas, and their ducts were all normal (*London Lancet*). Dr. Wynter Blyth made an analysis of the stools of a patient of Dr. Thin, and showed that more than half of the organic solids consisted of neutral fats, apparently milk-fat, which had passed without being digested or saponified. Nearly six per cent. of bile acids were present as soap, thus showing that bile was not altogether wanting. As the fat in the stool was only a fraction of the quantity taken in the milk, it followed that a considerable portion of the milk-fat had been digested, thus affording clinical evidence of the presence of the pancreatic secretion. In fact, milk is the only diet that many of the patients affected with this disease can take. The practical importance of these observations is obvious. It has generally been held that colorless stools denote serious interference with the functions of the liver or pancreas, either due to disease of the organs themselves or to obstruction of their ducts. We see, however, from the observation which we have just considered, that such is not necessarily the case; and it is a question well worthy of serious consideration, whether in numerous other cases we are right in concluding that the liver and pancreas are not acting normally, because this symptom (colorless stools) is present. Dr. Thin suggests that the coloring matter of the fæces in psilosis is destroyed low down in the intestinal canal by bacterial action, and until some other agency has been discovered, or this theory shown to be untenable, we must conclude that the views hitherto held as regards the white stools, although probably correct in the majority of cases, are not complete, and that further investigation is necessary before the matter can be considered to be satisfactorily settled.

Clinical Department.

MERCURIAL TREMOR.

By J. FREDERICK CLARK, A.M., M.D.,

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LATE RESIDENT PHYSICIAN PHILADELPHIA HOSPITAL.

In the MEDICAL RECORD for October 22, 1892, there is a note of a lecture by Professor Charcot, denying the existence of mercurial tremor. With the permission of Dr. Charles K. Mills, I wish to report a case under my charge, in his wards of the Philadelphia Hospital.

The patient, John ——, eighteen years of age, American, no venereal or alcoholic history, came from a large hat manufactory, where he had worked for two and a half years. For seven months before admission he had been troubled with a tremor. This began in the hands, extended to the legs, and finally to the tongue and lips. As the boy stood before me he shook as violently as does a man in a severe ague rigor. He could not pick up objects from the table, and with great difficulty could he drink from a glass. In descending the stairs his legs became so unmanageable that he was compelled to sit down and slide along on the buttocks. The left side was slightly more affected than the right. The speech was stammering; memory had failed. The eyes were normal and bowels regular, and there was no ptyalism. Iron, quinine, and strychnia in small doses, with nine, and later six grains of potassium iodide daily, rapidly relieved all the symptoms. In two months the lad had sufficiently recovered to be discharged. I could see no evidence of hysteria. The history, symptoms, and course of this case led me to call it plainly mercurial intoxication.

Becoming much interested in the subject, I visited the hat manufactory, and with the aid of the intelligent and courteous foreman, made a thorough examination of the building.

The fur used in making hats is coated, before it is removed from the skin, with mercuric nitrate, and then allowed to dry. The men who apply this solution, though they wear gloves, are nevertheless frequently ptyalized.

The dried fur is next cut from the skins and put in machines which clean and separate it. The department where this is accomplished is called the "blowing-room." The air here is constantly filled with a dust from the fur, a dust charged with mercury. In this department my

patient worked, and in this department most of the cases of tremor originated.

My conclusions, from observation and the statements of the foreman, were, that mercury inhaled for a long time produced the tremor; while introduced by the skin and alimentary tract, it caused ptyalism.

Introduced by the lungs it would certainly be carried more directly to the brain, and possibly in a different chemical state than when acted upon by the digestive juices.

A REPORT OF THREE CASES OF INTESTINAL OBSTRUCTION.[1]

By FREDERICK HOLME WIGGIN, M.D.,

NEW YORK.

Mr. President and Gentlemen of the Alumni Association: On September 1, 1892, I was called to see Miss S. B——, aged forty-two, who gave a history of various uterine disorders, extending over a period of seventeen years, during which time she had many attacks of pelvic peritonitis and several of slight intestinal obstruction.

On August 27th she was taken with vomiting, colicky pains, and constipation. Many enemata had been administered, with slight results, but no purgatives per os. A short time previous to my visit on September 1st the vomited matter had become fecal in character. On examination per vaginam the uterus was found very much enlarged and bound down by adhesions, so that it was practically immovable. Being late in the evening, operative measures, which seemed necessary, were deferred until morning, and in the meantime an enema of ten ounces of saturated solution of magnesia sulphate and one ounce of glycerine was administered. On my return in the morning I found that her bowels had moved freely and the operation was postponed.

On October 29th, the patient being in a fairly good condition, laparotomy was performed, the tubes and ovaries, being diseased and adherent, were removed, and adhesions between intestines and uterus were broken up. The uterus was drawn forward and stitched to the anterior abdominal wall. In freeing the ovaries a small cyst in each was ruptured; the abdominal cavity was flushed with a six-tenths of one per cent. salt solution, and the wound was closed without drainage. The patient made a rapid recovery.

Case II.—On September 13, 1892, I was called to see Mrs. A. M——, aged twenty-four, whose history was as follows: During the previous three years she had had many attacks of pelvic peritonitis, and the writer had performed a laparotomy in August, 1891, removing the ovaries and tubes, and the adhesions which were encountered were broken up. The abdominal cavity was not flushed out, but was cleansed with sponges which had been wrung out in a one to thirty carbolic acid solution. The wound was closed without drainage; her recovery was uneventful. During the following months the patient's health steadily improved, but from time to time she suffered from slight attacks of intestinal obstruction which, however, were easily relieved by an enema and small doses of morphine.

On September 3, 1892, while the patient was away from her home, she was suddenly seized with an attack of obstruction. A physician was called, and he gave her various purgatives, the last being croton oil, notwithstanding the fact that he had been told of the previous attacks of peritonitis, and of the laparotomy. The bowels not moving under this treatment, and although the patient was vomiting almost constantly, she was driven in a buggy to her home twenty five miles distant, where I was called to see her soon after her arrival. At this time vomiting was very frequent, colicky pains in the abdomen were severe; the temperature was 99° F.; pulse, 88. I was told her bowels had moved shortly after her arrival. On the 9th, I was told that her bowels had moved twice, but though a request had been made to have the movements saved, this had not been done. Vomiting and pain continued with less urgency, and I was misled by the fact that, contrary to directions, the patient was given all kinds of food and liquids, and supposing her bowels had moved sufficiently, I naturally thought much of the trouble was due to gastritis induced by the medication. This state of affairs went on until the 13th, when I administered an enema of four ounces saturated solution of magnesia sulphate and a half ounce of glycerine. At this time her pulse was 100, temperature, 99½° F. Much pain was complained of. Soon after the administration of the enema, the pulse ran up rapidly to 140, and patient died in about twenty minutes, of shock due to perforation of gangrenous gut, strangulated by a band low down in the pelvis, as was demonstrated at the necropsy. It was also found that the intestines in the neighborhood of the old cicatrix and in the pelvis were so matted together that it was very doubtful if an operation would have been successful.

Case III.—On September 26, 1892, I was called to see E. E——, a farmer, forty-one years of age. He had not been feeling well for some time, had lost his ambition to work, as he expressed it, and had pains in his back and in the umbilical region. On September 24th, previous to my having been called, he had had a small movement. The pain becoming much more severe, a physician was consulted. On the 25th the patient was worse. The same treatment was continued. On the 26th, when I was called, I found the patient suffering from almost constant vomiting and violent colicky pains in the umbilical region. On examining the abdomen no special point of tenderness was found, but the abdomen was slightly tympanitic. The patient had anuria. Temperature, 97½° F.; pulse, 58. Intestinal obstruction was diagnosed and one large enema was given, which produced no result. Laparotomy was advised as soon as practical, and during the night morphine was given, also stimulants per rectum. Early the next morning the laparotomy was done. A volvulus of small intestine was found which was relieved, when the circulation in the bowel below the constriction was seen to return. The abdominal cavity was flushed out with a hot six-tenths of one per cent. salt solution and the wound was closed. Two hours after the operation his temperature was 98½° F., pulse, 72. There was no pain, and the vomiting had ceased, but recommenced in six hours and continued to the end. On September 28th the morning temperature was 99° F.; pulse, 72; evening temperature, 99½° F.; pulse, 78. On the 29th the morning temperature was 99° F.; pulse 70. During the afternoon the patient complained of a sudden severe pain, became collapsed, and soon died. The necropsy showed that the wound had united by first intention, and that the cause of death was a perforating ulcer of the duodenum.

These cases suggest a few important points to which I would like to call attention.

The first, and I think the most important one, is that in Cases I. and II. the only marked symptoms were the persistent vomiting and colicky abdominal pains. These symptoms, in my experience, are never wanting, while most of the others, such as collapse, tympanites, and constipation may or may not be present. Movements frequently follow enemata when obstruction exists, fecal matter coming from the rectum, as in both of these cases. A case of volvulus of the entire small intestine is reported by Ashley, in the *British Medical Journal*, January 21, 1891, the only symptoms being persistent vomiting and pain.

Second, purgatives in these cases should never be given; they do great harm, and in Case II. the use of violent purgatives possibly converted a partial obstruction into a complete one by the violent peristaltic action excited.

[1] Read before the Alumni Association of Bellevue Hospital, December 7, 1892.

Enemata.—Ordinarily, if the case is not one of too long duration, it is well to give an enema; if a large one, place the patient in Sims's position, the fountain syringe not to be elevated over six feet above bed, as if more pressure is used the inflamed gut may give way. An enema I have often found satisfactory is composed of eight ounces of saturated solution of magnesia sulphate and one ounce of glycerine, thrown well up into the gut, through a tube. In Case I. this was done, although the patient had fecal vomiting, and the bowels moved, thus allowing the patient to recover her strength before undergoing the laparotomy, and thereby lessening her danger. In Case II. a similar enema, but half the quantity, without the tube, was used, the patient being in apparently better condition than Case I, and yet she died in twenty minutes after the enema was administered. Of course this case, under any circumstances, would have proved fatal, therefore an enema must not be regarded as perfectly safe, and should be used with much care.

Daniels reports, in the *Medical World*, May, 1891, a case of obstruction where an injection of coal oil followed by warm water gave relief after other measures had failed. If the diagnosis is clear that one has to deal with some form of obstruction, one enema only should be given, and by the surgeon himself, and if this fails, a laparotomy should be done without further delay. More lives are lost by delaying operation than by doing it too early.

Use of Solutions in the Peritoneal Cavity.—It is coming to be generally believed that it is best not to use any chemical solution in the abdominal cavity. The best one is the six-tenths of one per cent. salt solution, about a drachm to the quart of sterilized water. In Case II. no solution was used in the peritoneal cavity; but unfortunately the cavity was cleaned with sponges that had been in a 1 to 30 carbolic acid solution. The instruments had been immersed in the same, the hands of the operator had been soaked in a 1 to 1,000 bichloride solution, and to this I attribute the great mass of adhesions found at the necropsy. In Case I. the belly was first scrubbed with soap and water, then shaved, then washed with a fifteen-volume solution of hydrogen dioxide, then with a 1 to 2,000 bichloride solution, and this was followed by a ten per cent. iodoform and ether solution. The instruments were first sterilized by steam and then placed in a normal salt solution. The sponges which had been soaked in a 1 to 30 carbolic solution were rinsed out in a sterilized salt solution several times before they were used, and the hands of the operator, after being disinfected in the usual manner, were finally washed in a salt solution. I would like to call attention here to the use of hydrogen dioxide for soaking the fingers before operation, as it cleanses and disinfects under the nails and loosens the dead epidermis, and this gives the bichloride a chance to disinfect the skin properly.

Finally, if we find our patient in collapse, as in Case III., after diagnosis is made, it is wise to rally patient with hypodermic injections of morphia and stimulants per rectum before operating.

55 West Thirty-sixth Street.

A VETERAN GLASS EYE.

Dr. S. Mitchell, of Hornellsville, N. Y., writes: "In Dr. A. E. Davis's excellent paper on "Enucleations," published recently in the Medical Record, the author speaks of the case reported by Dr. Chisholm, where a woman wore an artificial eye continuously for fifteen years.

"This instance recalls to my mind a case, in the person of a lady, aged fifty years, who called upon me during the past summer to have an artificial eye inserted. The right eye had been enucleated, eighteen years previous, by Dr. T. S. Updegraff, of Elmira, who supplied her with an artificial eye at that time, and as the shell was too large, the doctor had caused it to be ground down, thus leaving a square-cut border which had in no way interfered with the comfort of wearing the eye. This was the only artificial eye she had ever possessed and it had served her continuously and well for eighteen years and she was wearing it when she came to my office. Of course it was somewhat the worse for wear. It had been broken several times, but each time by the aid of a little cement its former usefulness was restored. Once a nearly fatal crash had overtaken it, and a triangular fragment of considerable size of its precious sclerotic was lost, but the ingenious wearer, 'with an eye to business,' nicely fitted a piece of clam shell to supply the deficiency, and the 'crazy quilt' was thus able to round out eighteen years of usefulness, and no doubt would have completed a plump quarter of a century of eminent cosmetic service had it not been for the fact that an advancement in the financial and social scale of the lady demanded a new eye to wear on special dressy occasion, and not that this broken, battered, and patched servant was the cause of any irritation."

A CASE OF CHRONIC PERITONITIS WITH EXAGGERATED NAUSEA, RESEMBLING THE MORNING SICKNESS OF PREGNANCY.

By ROBERT BOYD, M.D.,
ASSISTANT SURGEON, U. S. NAVY.

F. M——, female, aged sixteen, unmarried, apparently strong and healthy; good family history, both parents living and in good circumstances.

The patient was first seen on October 20th. For the last week she had been complaining of malaise, headache, sleeplessness, and anorexia, constipation and abdominal pain and tenderness, increased on pressure, and situated in the right iliac region. Abdominal palpation revealed nothing. In addition to these symptoms there was exaggerated nausea occurring every morning, and simulating the morning sickness of pregnancy. There was no history of gastric trouble.

On October 25th the patient was too weak to leave her bed; typhoid symptoms developing; evening temperature, 103° F, pulse rapid (90) and feeble. The tongue was dry and fissured, the urine high-colored and scanty. Constipation continued, and there were several attacks of epistaxis. On palpation the abdomen was found hard and tense, and enlarged, but there were no signs of ascites. The enlargement was symmetrical, very much resembling in size and shape a pregnant uterus at the fourth month.

Vaginal examination was negative. The breasts and areola were normal, but the nipples were prominent and erect. The patient menstruated last on October 15th.

The patient was kept on a fluid diet. The typhoid symptoms gradually subsided, but the morning nausea persisted, with occasional retching. The appetite was capricious. The patient was becoming weak and anæmic.

Up to November 2d the patient had continued the same, but now began to feel somewhat better, although the abdominal enlargement persisted and was so marked that her clothes could not be fastened. Her carriage and gait were those of a pregnant woman. On November 5th the abdominal swelling and nausea were found to be gradually subsiding, and the patient was feeling much better.

On November 17th the abdominal swelling had nearly disappeared and the patient was menstruating freely. From that time on there has been no recurrence, and the nausea has nearly ceased.

The mother states that two years ago the patient had typhoid symptoms which subsided in a few days, but that at that time there was no abdominal enlargement.

Two physicians in consultation decided the diagnosis of chronic peritonitis to be correct.

I mention this because I do not know of any other case in which nausea was such a prominent symptom in chronic peritonitis, and where also signs of pregnancy were developed.

U. S. S. Philadelphia, Navy Yard, New York.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE POLICY AND AIM OF THE MEDICAL RECORD.

IT is constantly occurring that favorable or unfavorable reference of some pharmaceutical preparation, or drug, or apparatus of interest to the profession is found in the columns of this journal, in the report of the proceedings of some medical society, in an original article, lecture, or other communication. All these are inserted solely with a view to the interests of our subscribers, who have a right, not to be denied, to look to the RECORD for an outspoken expression of opinion upon everything which belongs to its domain. It would be a dereliction of duty on our part to withhold the truth, through fear or favor. Whenever any comment appears in the body of the RECORD favorable to any of its advertisers we are pleased that it is so, but it must be clearly understood that while the advertiser is welcome to all the benefit he may derive from it, the interests of the subscribers alone were considered in the insertion of the article. On the other hand, "with malice toward none," the RECORD, as does every other independent journal, occasionally prints an item which some watchful advertiser construes, or professes to do so, as an attack upon him and his wares. We always regret such occurrences, but we cannot dictate to contributors what they must or must not say—and would not if we could. It would utterly destroy the character and usefulness of the RECORD. Intelligent and reasonable advertisers understand all this, but we regret to say that there are others who do not. The MEDICAL RECORD has had threats of suits for damages during the past twenty-five years almost without number. Most of these have amounted to nothing more, but some have gone to trial. While some have claimed $100,000, more have been for less than $10,000. It is a pleasure to state that, notwithstanding the annoyance, not a single case has ever been decided against us, nor has a single penny ever been awarded or paid the plaintiffs.

The MEDICAL RECORD has always taken the position in the matter of book reviews that journals owe it to their subscribers to keep them informed of whatever is of interest to them, whether copies of such books are sent to the RECORD by the publishers or not. Publishers are under no obligations whatever to send their books to any journal for review; it is not considered a courtesy on their part, nor should its non-observance be reasonably considered a slight to anyone. We recognize it as a pure matter of business on the part of the publishers. The RECORD has never asked any favors of this sort of anyone.

The MEDICAL RECORD annually expends large sums upon its editorial staff and its numerous correspondents in all parts of the world. No expense ever deters it from the freest use of the telegraph and cable whenever the interests of its subscribers demand it. Its standing arrangement with the telegraph companies, by which it is accorded the advantages of press rates, enables it promptly to issue the latest news of the medical world, as no other journal of its kind attempts. In this connection we take occasion to state that we have always held that in scientific writing, and especially so in medicine, the best productions in the way of original contributions cannot be paid for as are mere literary productions. Men of experience who are authorities in our profession well understand this. They recognize that literature is not their aim, nor its emoluments, but that whatever they write, *con amore*, is another step, if possible, in the ladder of their professional advance. Such men seek as the medium of their communication with the world that journal which in their judgment will reach the greatest number of men who will be interested in the subject of which they treat, and thus it is that the editor of the MEDICAL RECORD is always crowded with valuable manuscripts awaiting their turn for publication.

THE FAILURE OF INTERNAL ANTISEPSIS.

WHAT antiseptic methods have accomplished in the treatment of wounds is known to all the world. But what antisepsis has failed to do for internal diseases, is not yet universally admitted. To disinfect wounds poisoned by bacterial life has proved to be a much easier matter than to destroy bacteria, or neutralize their effects within the organs and tissues of the human body.

In the *Dietetic Gazette* for November, 1892, editorial comment is made on the practical failure of internal antisepsis. We are also of opinion that it is about time "to call a halt in the eager pursuit of parasiticides that are supposed to pursue the microbe to its innermost hiding-place and destroy its vitality, ere it jeopardizes life and health. A little reflection must demonstrate that the treatment of infectious diseases by antiseptics is one of the will-o'-the-wisps of the present progressive era."

The article referred to then gives the following reasons why internal antisepsis has been, on the whole, decidedly disappointing:

"First. It is not probable that the action of parasiticides, as demonstrated in the test-tube, may be relied upon in the remote recesses of the human body. Conditions exist here which must modify or neutralize their effect. The various acid and alkaline fluids, through which the anti-parasitic remedy must pass, the osmotic conditions to which it may be subjected, its possible entanglement in mucous or purulent fluids—all these operate more or less antagonistically against the precision which is attainable in the laboratory.

"Second. A large proportion of the organisms to which are attributed baneful results in many diseases, are usually not accessible to the action of parasiticides. In typhoid fever, for instance—a disease in which superficial

reasoning would direct their attack to the main lesions in the intestinal tract, a deeper study would develop the fact that ere the disease is diagnosed these organisms have already passed into the lymphatic glands, the spleen, and even into the small lenticular spots on the skin, which are the chief characteristic of the disease. How naphthaline, or salicylate of soda, or salol, or sulpho-carbolate of zinc, or bismuth, is to enter the blood and pursue these enemies into their very innermost lairs, 'passeth the understanding.'

"Third. Even if this were possible, the experiments of Koch and others have shown conclusively that certain concentrations are required for certain bacteria. No sane man would venture to apply these concentrated solutions of antiseptics to any large surface of the body, lest the local or general effect resulting from absorption produce the most dire consequences. Nor would it be possible to maintain the integrity of the blood in which they are supposed to be dissolved.

"Fourth. Even if this were possible, we are confronted with the fact that it is not the micro-organisms themselves which are to be dreaded, but the ptomaïnes and toxines, whose effect is so destructive to the animal economy. Since the organisms are already firmly intrenched in the latter and have already begun their productive career when the physician's aid is invoked, the attempt to destroy them would be futile."

These reasons are well stated, and it is useless to attempt a denial of the disappointment of physicians in the practical outcome of internal antisepsis.

It is true that medical journals teem with the reports of recoveries from infectious diseases ascribed to the action of antiseptics, especially the newer ones. But in self-limited diseases the *post hoc ergo propter hoc* variety of reasoning is singularly inapplicable. We have no wish to belittle the efforts of experimental pharmacology in its constant search for new and better remedies. But the principles underlying rational treatment must never be lost sight of by those who pretend to believe in scientific medicine as opposed to mere empiricism.

THE DREAM OF THE OVARY.

When the window pane is broken, how demure and quiet all the boys are. No one has done it, and each looks in such innocent wonder at his neighbor that it seems almost cruel to ask questions. The only unpleasant aspect of the affair is the fact of the damage done. Everything else is so refreshingly guiltless that we are almost thankful that the alleged accident has happened, in order that the innateness of the good should become so strongly accentuated.

So it is with the discussion concerning reckless surgery recently held in one of the leading dailies. The charge has been made, with no reason, of course, that surgery is becoming too invasive. If anyone believes that such is possible he has merely to read the conservative interviews and be at once disabused. With the incoming year each and all of us will hail this radical change in opinion with becoming joy.

What glad news this will be for the little ovary, which can now uninterruptedly carry on its particular home industry instead of becoming domesticated into the pickling-jar of the progressive gynecological pathologist. Its commoner and multiplied diseases will vanish, the innocent cysts will no longer be apologetically demonstrated, and operative statistics will dwindle. The peritoneum will no longer be a thoroughfare, and the surprised gut will less seldom twist its bashful coil from the light of day, or join in the unnatural alliances of advanced intestinal anastomosis. The vermiform will gladly retire to private life; the wandering kidney will be more likely to stay at home, and even the gall-stones will elbow their faceted sizes through the dark tunnel of the common duct in the good old-fashioned style, only to be lost in the harmless embarrassment of a delayed stool. Let us hope, then, that the surgical millennium is coming, that the knife shall be turned into a spoon, that the pill shall once more have its right of way, that the ovary shall hereafter peacefully wrap the drapery of the broad ligament about her and lie down to pleasant dreams of families yet to be.

THE TREATMENT OF RHEUMATOID ARTHRITIS.

There is a growing conviction, which amounts to a feeling of certainty among many physicians, that rheumatoid arthritis, or rheumatic gout, is not a form of rheumatism or gout at all, but is a neurotrophic disturbance. Dr. John Kent Spencer, who takes this view of the disease, has been writing upon its symptoms and treatment in *The Practitioner*. What he says deserves much consideration, and may be of help to some of our readers. For there is surely no more obstinate and intractable affection than chronic rheumatoid arthritis when it has once firmly secured a foothold. Dr. Spencer is earnest in urging the importance of recognizing early the nature of the disease. It is almost always regarded and treated at first as a form of rheumatism. Warm baths, salicylates, and other antirheumatics are given and strict diet is ordered, yet these measures invariably deplete the patient and do harm. It is in the early stages that visits to mineral springs and baths do good, yet often such remedies are reserved as a last resort. At this time, however, they are of little avail.

According to Dr. Spencer, the patient should be put upon a highly nutritious diet, including fats and carbohydrates. Cod-liver oil should be administered, and rich wines may be drunk. Dr. Duckworth recommends foods containing sulphur, such as onions, mustard, and cruciferous vegetables. The climate should be dry and sunny, and the patient should be treated as regards this point much as though he were a consumptive. Yet a comfortable home is better than many popular resorts. As regards medicine, Dr. Spencer says: "Iron and arsenic are almost always useful; and quinine may be combined with either. A mixture is made agreeable by the addition of glycerine and spirits of chloroform; or the medicines may be given in the effervescing form. One dose daily may be taken for a year or more, unless interrupted by casual illness. Eight grains of the iodide of iron pill go well with one twelfth of a grain of arseniate of sodium; and this, in the shape of two pills, should be continued once a day for many months. Iodine and the iodides are unsuitable in any other form, except for those patients in whom there is a manifest enlargement of the thyroid gland. This is a more common accompaniment of rheumatoid

arthritis than is generally supposed. Fifteen minims of the tincture of iodine with five minims of the *liquor arsenicalis* and chloroform water ought to be taken daily and continuously, if the specific effect of iodine be desired."

A hypnotic or anodyne, such as chloralamide, may occasionally be required.

For pyrexial accidents salicin and the salicylates are the proper medicines; but under no other circumstances ought they to be ever thought of. Gentle aperients are often necessary.

Much stress is laid upon local treatment, though it is not in the long run the most important.

Wrap any joint, says Dr. Spencer, which can be easily reached with cambric or flannel, and over this sponge water as hot as can be borne. Rub the joint once a week or so with acetic turpentine liniment, and then with some bland oil to prevent the counter-irritation from being too severe. If a cantharides blister be applied, it should be always on the cardiac side of a joint, and let the blistered surface be healed immediately. Paint rings of iodine liniment in the same situation. In the earliest stage (especially if there be pain and fatigue), keep the threatened joint at rest by one or more millboard splints, gauze tissue, and a light linen bandage. Do not let the joint have too much rest; on no account pack it up so that it may lapse into idle atrophy. People suffering from early arthritic lesions in the lower limbs should be equipped with laced knee-caps and flannel bandages on the legs. The upper limb may be supported with a hand-and-arm wooden splint, properly padded; gummed paper splints put on the front of the fingers keep them straight and out of danger.

After active symptoms subside, systematic exercise of the affected parts should be enjoined. Vapor and Turkish baths are harmful.

THE MASSACHUSETTS STATE BOARD OF HEALTH.

The Massachusetts State Board of Health has always done admirable work in the scientific investigation of sanitary problems. It receives about $50,000 yearly, and this is wisely and productively expended, so that its volumes of annual reports are works of permanent value. The example set by Massachusetts cannot fail to have a good effect in stimulating similar work in other States.

In its last and twenty third annual report, the result of the examination of 1,526 samples of water-supply are given, and the citizens of the commonwealth ought to know pretty well what they are drinking. Eight rivers were examined, not as regards their usefulness for navigation or water power, but in regard to their purity as sources of water supply. Forty five samples of spring water were analyzed, and one-half of them were found more or less contaminated. The results of studies of filtration and sewage purification are also given. The biological laboratory has been busy, and we learn that a sure method of finding and testing the typhoid bacillus has been found.

We had thought that the Board would drop the subject of arsenical wall paper for a time at least, but this is not the case. Wall-papers are still industriously analyzed, arsenic is found, and the dangers from poisoned walls are portrayed. It is also found that the water-colors used for decorating houses contain arsenic and are things to be avoided. Many useful and important statistics are given showing the prevalence and mortality of infectious diseases. These are accompanied with sanitary topographical maps, so that the inhabitants of the different towns and villages can easily tell in what kind of a health-resort they are living.

SCARLET FEVER IN THE WHITE HOUSE.

Some months ago there was tuberculosis in the White House. Now, one of the President's grandchildren is ill with scarlet fever. A combination of tuberculosis and scarlet fever within six months does not produce a healthful atmosphere, and the house evidently needs to be well looked after.

The situation of the President's mansion is not a particularly good one; its internal arrangements are very bad. The house is also the executive office, and the place where numerous large and miscellaneous receptions are held, to which people of all grades of health and cleanliness are admitted. It is not just or dignified for a great nation to allow its ruler to live in such quarters. The living apartments should be entirely separated from the executive offices and the public reception-rooms. We understand that a movement is on foot to secure such a change, and we trust it will succeed.

THE SURGEON GENERAL'S REPORT.

The annual report of the Surgeon General of the Army for the year ending June 30, 1892, recently issued, presents a somewhat encouraging statement of the health of the army. During the year there were 1,365 admissions to sick report per thousand strength, as compared with an annual average of 1,496 during the previous ten years. The number constantly sick was a small fraction over 42 per thousand strength, as compared with a trifle under 44 during the decade. The number of admissions to sick report per thousand strength seems very large when compared with that in European armies, but this is explained by the fact that in this country the men are taken on sick report whenever excused from any part of their duty, no matter for how short a period, whereas in other armies only the more serious cases are entered on the records. The five principal diseases from which the men suffered were, in the order of their frequency, influenza, catarrh and bronchitis, diarrhœa, rheumatism, and venereal disease. The greatest number of admissions to sick report were for injuries, of which there were 248.91 per thousand strength.

The decrease in malarial disease during the past few years has been very noticeable, for whereas it was formerly the chief cause of sickness in the army, it now occupies the seventh place, and it would be even lower in the scale, were it not for a few of the posts where it still prevails to a considerable extent. This gratifying decrease is attributed to the institution of drainage and sewerage, improved quarters, the abandonment of specially insalubrious localities, and a better water-supply. At many of the posts this latter is believed to have been the chief cause of the decrease of malarial disease, and in view of this the Surgeon-General suggests the advisa-

bility of issuing ice-machines with an attached condenser to posts that have a surface water-supply of doubtful purity. A further recommendation which he makes, and which ought unquestionably to be adopted, is that a medical representative be attached to all boards created to advise in regard to the construction and improvement of the military posts. The medical department would thus have a voice in such important matters as the selection of the site for, and construction of, post buildings, and also their heating, lighting, ventilation, sewerage, drainage, and water-supply. The advice of an experienced medical officer in those sanitary questions would doubtless result in the prevention of much sickness among the troops.

Good work was accomplished during the year in the organization of companies of instruction as training-schools for the hospital corps. The *personnel* of these companies consists of three medical officers, three hospital stewards, and four acting hospital stewards, one bugler, one artificer, one tailor, and forty privates. The objects of the organization are to have on hand, ready for any emergency, a trained body of sanitary soldiers, and also to build up a training school through which all men of the hospital corps shall pass. The medical department is now authorized to make direct enlistments in these companies of men from civil life who may have a special aptitude for the work, thereby relieving the line of the constant drain of some of its most valuable material. The course of instruction is both theoretical and practical, and combines the training common to all enlisted men, with that of special necessity to the sanitary soldier. The Surgeon General recommends that legislation be obtained to place these companies of instruction on a permanent basis, the work already done by them demonstrating the utility of such a measure.

The medical department has also succeeded in freeing from the clutches of pension agents those veterans of the War of the Rebellion who had lost their limbs. Under the law these pensioners are given artificial limbs every three years, or allowed a cash commutation instead. The agents were in the habit of retaining ten per cent. of the money so paid on the representation that their services were essential in securing a recognition of the claim. The Surgeon-General, however, made known that the services of attorneys were unnecessary in applications for artificial limbs or their commutation, with the result that these pensioners now communicate directly with his office, and thus save the ten per cent. formerly paid to agents for nothing.

INJECTIONS OF PHOSPHATE OF SODA.

Under the head of "What the Doctors Say" the New York *Herald* publishes weekly a series of most preposterous medical communications from Paris. These communications are apparently not written or even supervised by a competent physician, but are simply items gathered from the weekly Paris medical press elaborated by the exuberant imagination of the reporter. One of the latest and silliest announcements is that of a new method of curing nervous diseases by hypodermic injections of phosphate of soda. Our esteemed but most credulous contemporary, *The Herald*, has even devoted a leading editorial to this method, accounts of which have been running through American journals for some time. The phosphate injections were devised by a Belgian, not a Parisian, doctor named Crocq. He makes a solution consisting of two parts of phosphate of soda and one hundred parts of laurel water. Forty to fifty drops are injected daily. This is supposed to rejuvenate the nervous system.

The injections, as we are informed, have been tried by Dr. Dana for some months in Bellevue Hospital, and by others in this city. There is yet no evidence that they are of the slightest value, and on the contrary, everything seems to show that it is rank humbug.

THE JOHNS HOPKINS CO-EDUCATIONAL MEDICAL SCHOOL.

The Johns Hopkins Medical School has recently received the sum of $500,000. About $200,000 was raised by subscription, after much difficulty; the remainder was given by a public-spirited woman, Miss Garrett. The money is given on condition that the school be open to men and women alike, and that absolutely no distinction in sex be made. It is also provided that a four years' course be established, and that no one be permitted to matriculate unless he or she have a preliminary education equivalent to that given in the preparatory medical course at the University.

With its present equipment and the half-million dollars just received, the Baltimore school ought to be able to take a front rank at once among the institutions for medical education. Five years ago the position now attained by the school would have placed it almost at the head of our medical colleges. Now, however, with all its advantages, it must still be somewhat inferior to the best schools in our larger cities, for no amount of money or buildings can take the place of longer educational experience and greater clinical facilities. The admission of women will be of great advantage to that sex. Since, however, most female medical students are poor, and many are badly educated, it cannot attract a large number, even if there were not already excellent medical colleges for women.

DIPLOMAS FOR SPECIALISTS.

The University of Edinburgh has taken a rather remarkable step for a conservative institution. It has decided to grant diplomas in five specialties, viz., ophthalmology, mental disease, laryngology with aural and nasal surgery, medical jurisprudence, midwifery, and gynecology. These, as we understand, will be conferred on regular medical graduates who have taken the five years' course, and who subsequently take a year's course in the special study for which they wish to qualify. After six years of study, therefore, Edinburgh will send out specialists in nose, throat, eye, gynecology, etc.

Naturally this action on the part of a great educational body has aroused some concern among our British contemporaries, who as a rule regard specialism with much distrust. To us also it seems a measure not entirely wise. We do not look upon specialism as the "bugaboo" it is sometimes described. It is a tendency called forth by the necessities of modern medicine, and comes in response to a natural demand for the very best

technical skill. This is what no single man can possess in every line.

Still it has always been taught, and we believe it true that every man should do some general practice and should understand thoroughly general medicine before he takes up special studies. No one can pass from the medical college directly to special studies without acquiring an extremely narrow view of medical art. Yet this seems to be exactly what the Edinburgh University proposes. If the degrees were conferred only after three or four years of general practice and a year of special study, perhaps some good might be done; for since we are to have specialists it would be better to have them well trained at a good university. Now, however, we may expect to see professional cards with the titles M.D. plus Rhinol. et Laryngol. D., and other variations of the specialistic suffix.

FUROR SEXUALIS.

Not even the clergyman sees so plainly, so often, and so painfully, as does the physician, the results of sexual excesses and sexual depravity. No simple factor has so much to do with producing mental and physical disease, to say nothing of personal unhappiness and domestic misery. It was Matthew Arnold who said that the weakness of the English race was philistinism, of the German social cowardice, of the French, licentiousness. Few will doubt that of these three races the French are now the weakest, the most sterile, neurotic, and degenerate. All this is suggested by the sudden furor sexualis which seems to have attacked some of the great capitals of this country.

This is shown in our literature, our theatres, and the press. A casual glance at the tempting display on an ordinary avenue book-stand would quite take the breath away, if the phenomenon had not been one of gradual development: "Lustful Love," "Cupid's Amours," "Serpent Sin," "In Love's Arms," "Stolen Sweets," "Forbidden Fruit," "Wee but Wicked," are some of the chaste and attractive titles of works whose authors are either unknown or are simply notorious. The title-pages are also illustrated with highly-colored pictures of inflammable women, in various degrees of inartistic nudity. The stuff beneath is not literature, but cheap attempts to sustain interest with stupid stories of sensual men and women. But the books sell, mostly to adolescents, and next to voluptuaries with waning sexual powers.

As for our press, the nastiness seems mainly to furnish support to weekly publications, which retail licentious stories and gossip concerning the graceless libertinism of private individuals. We are not moralists, and we do not need to go further in the description of the present appeal to sensuousness on the part of writers and dramatic artists. We only write as students of the etiology of disease, and it seems to us impossible that such systematic coaching of the passions should not produce pathological results. The young men who are continually stimulated by lewd books and plays are led to satisfy their passions excessively, illicitly, or unnaturally. The young women are not unaffected by the same influences. We do not know whether there has been in late years an excess of gonorrhœa, syphilis, and sexual neurasthenia, but statements to this effect have been made. The birth-rate of illegitimates is said to be increasing.

When a person finds fault he is expected to present a remedy. We confess, however, that we have not any. Perhaps the present excess may lead to a reaction and cure itself. With so many youths growing up, and with every year a new crop ready and eager for sexual stimulants, it looks as if the market would continue. It is customary, however, to fall back on the "increase in intelligence of the masses," and perhaps in time this panacea may be sufficient. Surely it is true enough, leaving aside morals and religion, that an honest and continent life, a pure mind in a pure body, are the best for everyone.

MODIFIED NATIONAL QUARANTINE.

Governor Flower in his Annual Message deals with many questions of interest to the profession, but none more so than those referring to increased protection from quarantine, very properly urging the legislation for increased facilities for its enforcement. We are pleased to learn that he is inclined to be liberal in the interpretation of public sentiment.

"I am not opposed to a national quarantine, but to an exclusive national quarantine, such as is urged in contemporary discussion. There is a field in which the Federal Government must exercise quarantine powers. This field offers opportunity for realizing all the advantages urged for an exclusive national quarantine without incurring any of the disadvantages. Our great danger from cholera and other pestilent diseases is not from their origin in this country, but from their introduction from abroad. The important thing, therefore, is to prevent this foreign invasion. The Federal Government already has it within its power, through its consular service, to exercise as stringent a quarantine against the importation of infectious and contagious diseases into this country as could be accomplished in any other way.

"A rigid system of inspection at foreign ports, under the direction of the consular service, would form the best kind of national quarantine. As for the rest, it can safely be left to State jurisdiction and control. A complete Federal quarantine within the legitimate field of Federal power, will fitly supplement a complete State quarantine within the natural field of State power, and both supplementing each other in this way will afford the securest protection to public health."

Well said! If such a plan could be carried out it would doubtless prove eminently satisfactory.

The Geographical Congress, held last summer in Berne, passed a resolution calling upon Englishmen of science to desist in future from the use of their ancient units of weight and measure in scientific and technical publications, and to employ those of the metric system only.

An English Edition of a French Journal.—*La Semaine Médical* which has for some time been publishing a Spanish edition, announces that this venture has been so successful that arrangements are being made to publish an English edition. The first number will appear about the first of the year.

News of the Week.

Precautions against Cholera.—The Health Board has selected twelve of the seventeen doctors of the summer corps and put them on the probationary list as medical inspectors, at $100 a month. Each will be assigned to a district, and required to make a weekly report of its condition. This precaution is taken in view of the possible appearance of cholera in the spring. The inspectors will be under the charge of Dr. Herman M. Biggs.

Typhus Fever has again developed in this city. At date of writing sixty-four cases had been discovered and isolated. Vigorous measures are being taken to stamp out the infection, and there is little doubt that the Health Board will succeed.

Circulating Medical Libraries.—In London, Leipsic, and various other continental cities, there is some place where medical and scientific men can go and borrow books, paying a small fee for the privilege. It would be very desirable to have some such place in this city. The New York Hospital Library is very liberal in this regard, but it cannot do much, while the Academy of Medicine finds that it can only loan duplicates. There is an opening, possibly, for some enterprising bookseller to accommodate the public and advertise his wares.

A Provident Dispensary has been started in Boston under the auspices of the Wells Memorial Institute.

The Registration Reports of Vital Statistics for Massachusetts have, says the *Boston Medical and Surgical Journal*, always been models of careful and expert work. This year we are told, however, that "the present incumbent of the office of Secretary of State has departed from the established custom of forty-nine years, has taken the report from competent hands in the office of the State Board of Health, where it was edited by the Board's secretary, Dr. Abbott, with the co-operation of Dr. Walcott and Dr. Draper, and has given it to an untried and inexpert editor, the design being, in the words of the Secretary of State, 'to reduce the volume of the statistics as far as may be, without impairing their practical utility.'" The *Journal* then cites a long list of mistakes, and expresses the opinion that the report is of little value.

Regulation of Medical Practice in Pennsylvania.—Twenty-four of the States and Territories have already laws regulating medical practice, and Pennsylvania wants to join the list. A bill has been prepared by the State Medical Society for this purpose, and systematic efforts are being made to get the bill through the Legislature. In the circular sent out is a very forcible quotation from the decision of Justice Field, of the United States Supreme Court. He says: "No one has a right to practise medicine without having the necessary qualifications of learning and skill; and the statute only requires that whoever assumes, by offering to the community his services as a physician, that he possesses such learning and skill, shall present evidence of it by a certificate or license from a body designated by the State as competent to judge of his qualifications" (U. S. Supreme Court, 129 U. S., 114).

Reviews and Notices of Books.

MANUAL OF PRACTICAL, MEDICAL, AND PHYSIOLOGICAL CHEMISTRY. By CHARLES E. PELLEW, E.M., Demonstrator of Physics and Chemistry in the College of Physicians and Surgeons, New York. 8vo, pp. 314. New York: D. Appleton & Co.

THIS is essentially a medical student's text-book of chemistry, and is destined to become a standard work of its kind. The author has given the results of his experience as a teacher by embodying in a series of thirty lessons every subject and every test bearing upon a proper medical training in medicine. These lessons not only deal with physiological chemistry, with food-stuffs and different fluids and tissues of the body, but with the clinical tests for the same.

The work is divided into nine parts, with the following captions: Carbohydrates, the fats and fixed oils, the proteids of albuminous bodies, the inorganic constituents of the body, water analysis, animal tissues and secretions, the digestion, and the urine in health and disease. The descriptions of the different methods are terse, practical, and intelligible, while the numerous illustrations of microscopic appearances are as faithful and accurate as can be expected from ordinary woodcuts.

A MANUAL OF THE PRACTICE OF MEDICINE, PREPARED ESPECIALLY FOR STUDENTS. By A. A. STEVENS, A.M., M.D., Instructor of Physical Diagnosis, University of Pennsylvania. 12mo, pp. 500. Philadelphia: W. B. Saunders. 1893.

THIS is a good, compact, well-arranged, and practica manual of its kind, and will serve its purpose as an efficient aid to the student in attendance upon lectures in general medicine.

DE LA VALEUR ET DES EFFETS DU LAIT BOUILLI ET DU LAIT CRU, DANS L'ALLAITEMENT ARTIFICIEL. Par le DR. HENRI DROUET, ancien Interne des Hôpitaux de Paris et de la Maternité de l'Hôpital Beaujon, Paris. Societé d'Éditions Scientifiques, 4 Rue Antoine Dubois. 1892.

THIS book details very important points in the question of artificial feeding. It describes the changes that milk undergoes during boiling. According to this author, and he cites Richet, the coagulation of the casein is more rapid in the infant than in the adult, owing probably to the greater amount of pepsin present in the newly born, admitting that this coagulation is due to a special ferment called Lab ferment.

Hammersten has established that this ferment is more abundant in younger animals, and this explains the rapidity of coagulation.

The transmission of different diseases through milk as a nutritive medium is brought out in detail, the most important of which are: 1. Transmission of diarrhœa through the medium of milk, more particularly through its microbes. 2. Typhoid fever. In this connection the author quotes M. Hérard, who gave some milk of an animal suffering with typhoid fever to a child of seven months. The child contracted the disease and died on sixth day. An important point is the possibility of the typhoid germ being introduced in the milk by its adulteration with water containing typhoid bacilli. It is a fact, however, that milk once boiled, though it originally contained the typhoid bacilli, cannot propagate the disease after the boiling. 3. Diphtheria. The same is true in diphtheria as in typhoid fever, that milk (infected) can easily propagate the disease during an epidemic. Roux and Yersin have sufficiently demonstrated that diphtheria virus cannot stand a temperature of 58° Celsius more than a few minutes, *i.e.*, a temperature much below the boiling-point. 4. Scarlatina. This affection is very frequently disseminated through the agency of

milk. 5. Aphthous fever. That this can also be transmitted has been frequently proven. 6. Peripneumonia has been demonstrated to be communicable by contagion in the child from the milk of an infected animal.

In all diseases mentioned it is proven that the virulence is lost by boiling the milk. We can, therefore, affirm that boiled milk offers an innocuity which is not offered in crude or raw milk.

Indisputable proof is offered of the direct contagion transmitted by milk of the tuberculous bacillus. Koch thinks that milk is not contagious, excepting when the mammary gland is affected with tubercle. Bang, on the contrary, thinks that milk contains the bacillus very often, although the glands are not affected, and recent researches have borne out the exactitude of the latter statements.

Another point brought out clearly is, that Cohnheim stated that with gastric juice in a healthy stomach, it will always destroy the virulent properties of tuberculous products. For him the infection by way of the gastro-intestinal tract can only take place when, owing to an existing catarrh, the quality of the gastric juice is altered, permitting the tuberculous virus to pass into the intestines without change in its virulency.

This author has proven by experiment that milk infected with the bacillus tuberculosis, and which is allowed to remain in contact with healthy gastric juice, can still show virulent properties.

The way in which epithelial desquamation takes place in mouth and intestines, and the method of infection, are clearly discussed.

Le Bacterium Coli Commune ; son Rôle dans la Pathologie. Par le Dr. Maxime Macaigne, ancien Interne des Hôpitaux de Paris, membre de la Société Anatomique. Paris : Societé d'Éditions Scientifiques. 1892.

These two volumes are the result of numerous investigations, covering numerous cultures with the bacterium coli commune. Its relationship to typhoid fever, to enteritis, and to dysentery are carefully considered.

The coexistence of infectious peritonitis and strangulated hernia with the bacterium are interesting. He arrived at the following conclusions : The bacterium coli commune (normal) is generally inoffensive for animals. It is not virulent. It is identified with divers microorganisms : 1. Bacill. neapolitan of Emmerich. 2. Bacill. fœtidus of Passet. 3. Bacill. pyogenes of infection. 4. Bacill. lactis ærogenes. It presents analogies with bacill of dysentery of Chantemesse and Vidal, also with the bacill. of endocarditis of Siebert and Lion, the bacill. endocarditis of Weichselbaum, the bacill. of enteritis of Gaertner. The opinion of Roux and Rodet, which makes the typhoid bacillus a transformation of this bacillus coli commune is, in the opinion of this author, not yet proven.

Human Monstrosities By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania, and George A. Piersol, M.D., Professor of Histology and Embryology in the University of Pennsylvania. Part III. Illustrated with Nine Photographic Reproductions and Thirty-four Woodcuts. Pp. 113 to 150. Philadelphia : Lea Brothers & Co. 1892.

This part is especially rich in plates. The subject of single monsters is continued, a considerable proportion of the text being devoted to cyclocephalus with its subdivisions, with numerous accompanying illustrations. Omphalositic single monsters and the composite variety are the other subjects which are discussed.

We can only add that the present volume, although smaller than its predecessors, fully equals them in the beauty of the illustrations and the clearness and conciseness of the text. A work of this character of course offers more scope for the artist than for the author, yet a subject so difficult as that of teratology requires more than mere illustrations for its comprehension, and the reader should not lose sight of the hard work which has been done in classifying and condensing the subject-matter in such a way as to render it of practical value. Great praise is due to the authors for the high scientific motives which have evidently influenced them in their labors. It is one thing to cater to the public taste, and another to do work the high excellence of which will be truly appreciated by a comparatively limited circle.

Obstetrics : A Manual for Students and Practitioners. The Student's Quiz Series. By Charles W. Hayt, M.D., House Physician, Nursery and Child's Hospital, New York. Pp. 190. Philadelphia : Lea Brothers & Co.

We have always been of the opinion that it is preferable for the student to make his own compilations from the larger medical text-books ; still, quiz-compends have their place and will undoubtedly continue to appear in fresh crops every year, some better than others, but all modelled on the same general plan. The present volume is hardly up to the average, as will be evident by a review of the sections on abortion, occiput posterior, post partum hemorrhage, nursing, etc. Several errors due to careless proof-reading are noted, as "saline solution of milk," on page 169. In general it may be said that too much ground is covered to be covered well.

The Principles and Practice of Medicine. Designed for the Use of Practitioners and Students of Medicine. By William Osler, M.D. Pp. 1079. New York : D. Appleton & Co. 1892.

Dr. Osler's work is one which we have read with especial interest, as coming from a physician of known eminence who has made himself particularly well versed in pathology and bacteriology. His work shows the impress of this knowledge in his discussion of the cause and nature of disease. While not thrust into undue prominence it will be found that he receives and adopts the view of the microbic origin of infectious and inflammatory diseases.

In trying to describe the special excellences of the work it is difficult to emphasize any single point. Its chief merit lies in the fact that the descriptions of disease are nearly all brief, clear, accurate, and up to date. There is no attempt at originality in classification, no new doctrines are preached, and the therapeutics is conservative. The measures accredited by the largest experience are generally given. Dr. Osler does not believe in the efficacy of antiseptics in typhoid fever, but he does recommend cold baths. He denies that pneumonia can be aborted by any measures whatsoever. He accepts the Klebs-Loeffler bacillus as the cause of diphtheria, and admits the existence of allied pseudo-diphtheritic infections. In the description of renal diseases the author follows Delafield to a considerable extent, but he simplifies the subject, in our opinion, very successfully. The medical student will not be confused with an innumerable array of Bright's diseases.

The style is clear and simple without attempt at literary adornment. The book is well printed, but might be more generously illustrated. It will prove a very useful work to the student, less so, perhaps, to the practitioner, for it is not an advanced work or one rich in therapeutic suggestions.

Transactions of the American Otological Society, XXVth Annual Meeting. Pp. 193. 1892.

These transactions comprise, for the most part, papers and discussions on disease of the mastoid process of the ear, and operations on the middle ear for the relief of deafness, etc. Great benefit is stated to occur from opening the drumhead and removing some of the small bones of the ear. Experience shows that there is no greater danger in these operations on the ear than from other surgical procedures.

Society Reports.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 23, 1892.

H. P. Loomis, M.D., President, in the Chair.

Multiple Benign Cystic Epithelioma of the Skin.—Dr. J. A. Fordyce presented a patient, and a report of two cases of this rather rare condition occurring in a mother and her daughter. The daughter, a healthy-looking girl of nineteen years, first came under his care. As nearly as could be ascertained, the first thing noticed was the appearance of a number of small pimples, about the size of a pin's head, on the left temple and forehead, about six years ago. Similar papules appeared behind the left ear, and over the face and neck, and some of them reached the size of a split pea. When first seen by the speaker there were numerous small, translucent, pearly-looking tumors scattered over the forehead, temples, eyelids, cheeks, and nose, behind and below the ears, back of the neck, and through the hair. In general, the growths were discrete, firm, and painless to the touch, and in color differed but little from that of the surrounding skin. A central depression was noticed in several of them, giving them an appearance very similar to that of the lesions of molluscum contagiosum. Some of the tumors simulated vesicles quite closely, but puncture caused slight bleeding, and revealed a solid formation. The majority of the larger growths were covered with minute capillaries, and intermingled with the lesions were telangiectases and black pigment spots. Scattered among the small translucent lesions were a large number of white papules, differing in no respect from ordinary milia.

The size, appearance, and general distribution of the lesions in the mother were almost the counterparts of those on the daughter's face. She stated that her attention was first attracted to the eruption when she was about fifteen years of age, and that her father had always had a similar group of tumors on his temple. The eruption in her case was on the forehead, face, and ears, on the anterior, lateral, and posterior aspects of the neck, and over the upper portions of the back, neck, and chest. Numerous telangiectases were found on the cheeks, and a few comedones here and there over the face. At the inner angle of her right eye was a large semi-translucent tumor containing a number of white milium like bodies, and covered with dilated capillaries. This lesion is about the size of two peas, and she thinks it has grown during the past year. These tumors cause no inconvenience, except a slight itching during the summer. Quite recently Dr. Brooke has reported, in the *British Journal of Dermatology*, three exactly similar cases, occurring in a mother and her two daughters. The literature of this subject shows that these tumors usually appear about the age of puberty, the time when we expect the skin and its glandular appendages to show increased activity, and that they increase slowly in size until they attain the size of a split pea. Their surface remains quite smooth, and neither undergoes ulceration nor spontaneous involution; in other words, the entire course of the affection is free from any evidence of malignancy. So far no external application or internal medication has been successful in removing the growths. In the case presented, Dr. Fordyce had removed the majority of the larger tumors with a dermal curette, and the smaller ones with a comedo extractor. They are loosely attached to the surrounding tissues, and when the epidermis is broken are readily separated. The little wound thus left heals readily, with a slightly depressed scar.

Under low amplification the derma is seen to contain a number of irregularly rounded, oval, and elongated masses which take a deeper stain than the surrounding tissue. In some sections these cells intercommunicate in a remarkable manner. These masses bear a striking resemblance to adenoma, but with stronger amplification these darkly stained masses are seen to consist of epithelial cells having the same appearance as the cells in the lower layers of the epidermis. They are enclosed in connective tissue which has undergone considerable thickening and condensation. While in some of the sections the epithelial cells are densely packed together without a distinct structure, in others they are made up of tracts, two or more cells wide, which are twisted and intermingled in the most complicated way. Linear tracts, two or more cells wide, ramify throughout the derma, connecting the cell masses and occurring independently of them, the narrower ones closely resembling coil gland ducts, although no distinct lumen can be made out. These tracts recall the atypical cell proliferation in true epithelioma. In other tumors, again, the cell-heaps are more complicated in their structure, and show the "pearls" and cell "nests" of malignant epitheliomata. These nests are found in all stages of development. Again, the cell tracts are so arranged as to form an alveolar-like structure enclosing nuclei and such highly stained cells that a high power is necessary to reveal their presence. The walls of the alveoli, however, instead of being made up of fibrous tissue, consist of epithelial cells so arranged as to resemble the columnar cells of a cylindroma. The absence of an external limiting membrane is opposed to the view that the structure of these cell masses is glandular. Sections from the first tumors examined failed to show any connection between the new growth and the epidermis or glandular appendages; but further investigation of the tumors having a central depression revealed a direct down-growth and proliferation of the epidermis, and also of the external root-sheath of the hair-follicles. Normal coil glands and ducts were seen in a few sections, but they were less numerous than in an equal number of sections of the normal skin, while in some of the tumors none were found.

While it has been the almost universal custom to regard such histological appearances as pathognomonic of malignant epithelioma, the clinical appearance and natural history of the affection differ widely from the classical epithelial new growths. It is quite probable that benign epithelioma and adenoma sebaceum may have an analogous origin in fœtal life, for, as all the appendages of the skin are formed by the in-growth of the deep cells of the stratum Malpighii during fœtal development, it is rational to conceive that under the influence of certain conditions, not understood, at one time cells destined to form sweat-glands, at another those intended for the formation of sebaceous glands, and again those of an indifferent nature, might be cut off from the germinal layer, or retain their embryonic nature until brought into activity through some influence during the development of the individual. The use of the term "epithelioma molluscum" for molluscum contagiosum affords a precedent for enlarging the meaning of epithelioma, and no valid argument can be brought forward against the use of that term for this affection, which is so clearly demonstrated to be of an epithelial nature. The dividing-line between benign and malignant epitheliomata is yet undetermined.

Dr. T. M. Prudden said that, according to Thiersch's theory of the development of epitheliomata, the balance normally existing between the growth of epithelial cells and the resistance to such growth offered by fibrous tissue is disturbed, the atrophy of fibrous tissue in the skin, which occurs in old age, explaining the more frequent occurrence then of epitheliomata. Similarly, it might be supposed in the case just presented, that there exists an hereditary lack of resistance on the part of the fibrous tissue to the growth downward of epithelium in the skin. The existence of spined cells should be sufficient to decide between adenoma of the sweat-glands and a growth from epithelium of the skin.

Dr. Ira Van Gieson referred to the researches of Hauseman concerning the character of the karyo-kinetic figures in epitheliomata. Hauseman found that in epi-

theliomata the karyo-kinetic figures were quite uniformly asymmetrical, that is, appropriate staining fluids would bring out an unequal number of strands on the two sides of the equatorial plane, or show other irregularities in the various phases of mitosis. From the fact that in normally growing tissues, *e.g.*, in the regeneration of the rete Malpighii, the mitotic figures are remarkably symmetrical and regular. Hauseman suggested the very fascinating hypothesis that certain epitheliomata might have their origin in some epithelial cells, which departs from the normally regular and symmetrical method of cell division, and assumes an atypical mitosis. This atypical or asymmetrical mitosis is inherited by the progeny of the original deflected epithelial cell, and thus an atypical growth of epithelium or an epithelioma is produced.

Dr. Van Gieson could not corroborate Hauseman's findings of asymmetrical figures in quite an extensive examination of epitheliomata especially prepared to demonstrate karyo-kinetic figures. In this examination the irregular and atypical figures pictured by Hauseman were not verified. On the contrary, the figures appeared uniformly regular and symmetrical, as in normally growing tissues. The speaker had observed that in slowly growing epitheliomata these figures were very few in number, and even difficult to find, while in the more malignant growths they were very numerous, and quite extensively distributed through the sections. This contrast in the number of the mitotic figures, in the benign and malignant growths, is so striking that the number of figures present in the section may be regarded as a fairly reliable index of the malignancy of the growth, and a valuable aid in the diagnosis under the microscope.

Dr. Fordyce said he had not yet personally examined the specimens with reference to this point, but others had done so for him, and had found only very few of these figures.

A Fatty and Cirrhotic Liver.—Dr. J. W. Brannan presented a liver, taken from a very stout man, thirty-six years of age, who had been brought into the hospital for acute alcoholism. He was somewhat jaundiced. No further history was obtainable. At the autopsy abundant deposits of fat were found in all the organs, but the liver was of special interest. From its general appearance two experienced pathologists were led to make a diagnosis of hypertrophic cirrhosis. The liver weighed ten pounds. Dr. Hodenpyl examined it microscopically, and found fat in the acini, and a development of cirrhotic tissue in Glisson's capsule, the fatty degeneration seeming to be the more prominent feature.

Trichinosis.—Dr. G. A. Tuttle said that on November 14, 1892, three cases of trichinosis were admitted to the Presbyterian Hospital. All three patients had eaten raw pork on October 23d, and for about ten days after that they presented no symptoms. The father then began to complain of slight loss of appetite, and this was followed by three days of diarrhœa, accompanied by much prostration. Soon after this the muscular pains developed, with œdema of the extremities and face. On admission, motion of the muscles or pressure on them was very painful, and there was moderate fever. Three or four days before the death of the man, he began to show symptoms of paralysis of the diaphragm, and this increased until the respirations became entirely thoracic, and he finally died of exhaustion. A few days before his death, a portion of the gastrocnemius muscle was removed, and was found to contain large numbers of trichinæ. The other cases are now recovering. At the autopsy on the man, the parasites were found in the bowel, and especially at the entrance to the vermiform appendix, where were also found the parent trichinæ.

Dr. Prudden said he would like to know how frequently chance cases of trichinosis were met with in this city. He thought that at least one case of this kind was found each year in the anatomical department of the College of Physicians and Surgeons.

The President said that three cases had been seen at the University Medical College last winter, two of them being in the dissecting-room.

Dr. H. M. Biggs said that in an experience of six years in the anatomy-room, where there were at least one hundred and fifty subjects annually, he had only seen one case of marked trichinosis, and one or two others in which a few trichinæ were found. While watching autopsies in Germany he had been struck with the much greater frequency of trichinosis there.

A Foreign Body Impacted in the Pyloric End of the Stomach.—Dr. Ira Van Gieson said that he was indebted to Dr. Jenkins, of Brooklyn, for the interesting specimen which he had to present. Four years prior to the death of the patient, who was a robust man, fifty-five years of age, he was seized rather suddenly with intense epigastric pains, which were excited each time he took solid food. After about four months there was an interval during which the pain was not so severe, and then the symptoms were suggestive of pyloric stenosis, or of beginning carcinoma in this region. The man became greatly emaciated, and ultimately died of chronic phthisis. The stomach was of normal dimensions, but before opening it a solid body could be felt in the pyloric orifice, only about one-quarter of an inch in either direction. On opening the stomach a peach-pit was found embedded in the pylorus, but not projecting into the duodenum. This body seemed to act as a ball-valve, thus explaining the variation in the severity of the symptoms. If there were no stenosis present, a body capable of passing the pylorus should be able to pass the duodenum, but on examining the specimen closely, it will be seen that the junction of the duodenum with the stomach is decidedly narrowed.

Dr Thomas H. Manley did not think it probable that a peach-pit could resist the action of the gastric juice for four years; besides this, it did not seem to him of sufficient size to give rise to the severe pain from which the patient suffered. He would like to know the experience of the other members regarding the frequency of such foreign bodies in the stomach.

Dr. H. M. Biggs could not recall having seen a single case of this kind, and Dr. Prudden recalled the infrequent occurrence of hair-balls in the stomach. The specimen from one such case, which had been shown to the Society, was in the Museum of the College of Physicians and Surgeons.

Filaria Sanguinis Hominis.—Dr. E. Le Fevre exhibited a specimen of filaria, and showed the chylous urine which had been passed by the patient at 2 A M.

The President said that some idea could be obtained of the large number present in the specimen from the fact that about forty small fragments from the urine were teased out and examined under the microscope, and in about twenty of these specimens the filaria were found.

Hernial Sacs.—Dr. Thomas H. Manley presented specimens of hernial sacs. The first was removed from a patient who had been operated upon by another surgeon for the relief of a strangulated indirect inguinal hernia, but without removing the obstruction. When first seen by the speaker the patient was apparently in collapse, so, under cocaine anæsthesia, the wound was reopened, a constriction at the internal ring divided, and the sac removed. The patient made a good recovery. The second specimen was taken from a patient who had suffered for several years with colic and attacks of vomiting. The tumor gave no impulse on coughing, and the examination led him to believe that it might be a new-growth. An exploratory incision was made under cocaine anæsthesia, and the sac exposed, which contained three ounces of serous fluid. The sac was adherent to the surrounding tissues, but the old and firm adhesions were carefully separated and the sac removed.

Dr. Manley reported a case of a young man who, after an apparent attack of peritonitis, six weeks ago, noticed a fulness in the left inguinal region. This swelling became very tender, and there was some vomiting. On admis-

sion, there was a smooth, tense swelling situated between the external and internal rings, and on making an exploratory puncture, pus was withdrawn. An incision then evacuated a large quantity of pus from a fecal abscess, and examination showed that a portion of the sigmoid flexure of the colon had become strangulated at the internal ring, and that this had resulted in a spontaneous inguinal colotomy.

Anthrax.—The President presented specimens from a supposed case of anthrax. The patient was a tailor, twenty four years of age, who had been in excellent health up to one week before his death. A small pimple was first noticed on the side of his mouth, and this he picked. He soon developed a cough and a high fever, and about the fourth day this pimple had become larger and decidedly indurated. Two days after this he was so seriously ill that he was taken to the hospital. On admission his whole face presented the appearance of erysipelas, and this was the diagnosis made at that time. On the following morning the applications which had been made during the night had reduced the œdema, and the case was then diagnosticated as anthrax. At the autopsy, only two lesions were found, one in the mouth, and the other in the lungs. The former consisted of a necrotic area, one and one-half inch long by one inch wide, extending from the angle of the mouth on to the cheek. The lungs showed twenty or thirty necrotic areas varying in size from one-sixteenth to one-fourth of an inch in diameter, of a grayish color, and found chiefly in the upper lobes of both lungs. The centres of some of these areas were whitish, and apparently contained cheesy material. Sections were made from the lungs, and from the lesion in the mouth, including the surrounding healthy tissue, and cultures were made from the mouth and from the spleen. No anthrax bacilli were found, and many of the preparations, especially those from the mouth, were almost pure cultures of the staphylococcus. The case, then, is not one of anthrax, but a form of pyæmia, due to infection with staphylococci, which probably gained entrance through the large veins of the face. The small extent of the lesions and the rapidly fatal termination are the points of special interest in this case.

Dr. Fordyce said he was reminded of a very similar case which he had seen while in hospital. It was a well-marked case of facial erysipelas which developed within thirty-six hours an acute broncho pneumonia, and ended fatally in a very short time. In this case there was a descending phlebitis with multiple pyæmic abscesses in both lungs. It was not customary at that time to make cultures, so this part of the history is defective.

Dr. Prudden thought it had not been proved that the case under discussion was not one of anthrax, for Wechselbaum has recently shown that at a very early stage the bacilli of anthrax may entirely disappear from the local lesion, so that cultures made before death may be wholly negative, and yet in the secondary lesions the bacilli would be found alive. Moreover, staphylococci are quite commonly found in the mouths of people having catarrh. It is quite possible, therefore, in this case, that the bacilli may have disappeared from the local lesion, and the abscesses of the lungs may have been due to the staphylococci. It is possible that the staphylococci are more often present in the system than is generally supposed, and only await a sufficient constitutional disturbance to develop their activity. It is also possible in this particular case, in view of the fact that the cultures from the spleen were negative, that the pulmonary lesions were not due to systemic infection, but resulted from the inspiration of the bacilli, and the formation of infarctions.

Dr. H M. Biggs said that he saw a case last spring which supported the observations of Wechselbaum. It was a case of anthrax of the arm which began in the wrist. When first admitted to the hospital, it was sent to the erysipelas pavilion. Most of the arm was covered with very large blebs, and there were extensive hemorrhages into the cellular tissue. The patient was apparently doing very well, when suddenly one afternoon, about three o'clock, he complained of severe pain in the head, at four o'clock he was delirious, and at eight o'clock the following morning he was dead. The autopsy showed a most malignant form of meningitis with hemorrhages all through the meninges. All the cultures from the meninges gave pure cultures of the anthrax bacillus, while those from near the point of the original inoculation—the blebs and subcutaneous tissue—were absolutely sterile, and the tubes inoculated from the blood of the heart and spleen were also sterile. Preparations from the exudation also showed under the microscope large numbers of anthrax bacilli. At the time he saw this case he was very much puzzled to explain the infection of the meninges without any evidence of constitutional infection.

The Society then went into executive session.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, December 26, 1892.

Charles Carroll Lee, M D., President, in the Chair.

Adverse to a Missionary Medical School.—The following resolution, coming from the Comitia Minora, was adopted:

Resolved, That the incorporation of a medical school under the auspices of the International Medical Missionary Society would be unwise and injurious to the cause of higher medical education in the State of New York.

A New Agent in the Treatment of Epilepsy.—Dr. Paul Gibier, who was to have read the second paper of the evening, was called upon during the temporary absence of Dr. Emmet, who was to have read the first paper. Dr. Gibier had been led to try the new agent while testing the value of Pasteur's rabic virus against epilepsy, of which there had been some favorable reports. A patient treated against hydrophobia at the Pasteur Institute had been found afterward free from epileptic attacks, which previously had been frequent, and the method had been reported successful in some other trial cases. Dr. Gibier, however, had not been able to verify the results on a case which he had treated through the kindness of Dr. Dana. Thinking the virus may not have been the real curative agent in the reported cases, but rather the nerve substance injected with it, Dr. Gibier made injections of properly prepared gray matter in some cases of epilepsy and also of paralyses. The good effects had been witnessed by several physicians. A marked case of epilepsy was that of a young Frenchman who had now and then severe attacks, and each day a number of milder ones of vertigo. The expression was idiotic. The severe seizures had been reduced greatly in frequency as had also the attacks of vertigo, and the patient's intelligence had been markedly improved by injections of the "nervine." The treatment was a further application of the Brown-Séquard method, and promised to be very useful in a class of cases generally looked upon as almost hopeless. On some future occasion Dr. Gibier promised to give the results of its application in cases of other nervous troubles. Allusion was made to its possible modes of action. Diet and hygienic rules also deserved especial consideration in epilepsy.

Dr. Frederic Peterson thought any contribution to the treatment of so unpromising a class of patients as epileptics should be welcome. According to his personal observation of several hundred cases only about one in a hundred of idiopathic epilepsy was curable by known means. A great difficulty in treating epilepsy was the fact of its being a symptom of many pathological conditions. Thus far we had been compelled to rely chiefly on bromides.

Dr. James E. Kelly had witnessed some of Dr. Gibier's experiments, and, disliking empirical treatment

generally, had reasoned some upon the ways in which relief might possibly be obtained. He supposed the "nervine" injected subcutaneously either added something to the circulation which had not been there before and was necessary to the nutrition or wants of the affected nerve-cells, or it increased or diminished the blood-supply of the part by its influence upon the vaso-motor system.

Dr. A. D. Rockwell would welcome "nervine" if, like some other agents, it even did no more than enable us to get along with less of the bromides, which given alone and in large amounts possessed some serious drawbacks.

Means of Success in Gynecological Plastic Surgery.—Dr. Thomas Addis Emmet read the paper. It might be the impression of the younger men of the profession, he said, that gynecology was the outgrowth of the present decade, but this was not true either with regard to plastic or abdominal surgery, the seed of which had been carefully planted and nurtured over a quarter of a century ago. While the craze for opening the abdomen had in this country developed some of the most expert laparotomists, at the same time the skill necessary for successful plastic work had almost been lost. There existed not only lack of dexterity in execution, but also want of clear idea of what should be accomplished, so that frequent failure was the natural result. Recently there had been a tendency to do several plastic operations at one sitting, such as trachelorrhaphy, perineorrhaphy, and kolporrhaphy. The author thought better results would be obtained if there were an interval. There was then much more likelihood of primary union, which was essential to success in avoiding granulation and scar tissue. Repair of the lacerated cervix, which when properly performed was capable of conferring upon the patient an inestimable blessing, had, owing to the unskilful way in which it had been carried out, or want of judgment in the selection of cases, probably led to more harm than good.

For a full explanation of his views regarding laceration of the perineum he referred the audience to some papers which he had published, but on this occasion stated some general facts necessary to successful treatment. A chief cause of symptoms following laceration at the floor of the pelvis was want of support of the blood-vessels. Both the butterfly or trefoil operation, which he devised years ago, and his more recent modification, would repair the damage. But the dashboard-like obstruction put up at the vaginal outlet by many operators was a failure. A condition of success here, and also in vesico-vaginal fistula, reconstruction of the urethra, and other plastic operations, was the use of silver wire, which acted both as a suture and a splint, securing primary union and preventing the formation of cicatricial tissue. He was probably the only surgeon who had restored the entire urethral canal after it had sloughed away. He attributed the extreme rarity of hernia after his laparotomies to the splint action of silver wire, which he employed for closing the abdominal wound. With it there was no necessity for tightening the edges so firmly as with silk, which was a cause of cicatricial tissue. Indeed, silver wire was the only kind of suture which could be used in delicate plastic work in erectile tissue with the slightest prospect of success. The surgeon who could use this material would not have to resort to flap splitting, unless in vesico-vaginal fistula. He said by the way, that flap-splitting was not new, as some seemed to suppose, for he had employed it in 1864 Cicatricial tissue in erectile tissue would cause reflex symptoms and undermine the nervous system of women, and should be avoided in all gynecological plastic operations. Its presence after an operation implied bad surgery. Dr. Emmet had never met with an injury to the female genital organs produced by the usual causes which he could not repair, but those left by bungling surgery had often taxed his skill to the utmost degree. The object of plastic surgery was to restore the injured parts as nearly as possible to their normal state, and to avoid forming or to remove cicatricial tissue in structures naturally elastic.

Dr. W. M. Polk thought criticism upon any position taken by Dr. Emmet, to whom the entire profession was under such deep obligations, would seem out of place even if it could be shown to have any foundation in fact. He believed that the success in plastic gynecology of recent years was due in very great measure to the application of the principles of antisepsis. The author might have widened his field a little, and considered some plastic work above the symphysis pubis, such as the enucleation of fibroids from the uterus and excision of cysts from the ovary without removal of the entire organs. There, at least, the catgut suture, he thought, would take the place of silver wire. He believed that in some cervical and perineal operations the use of silk was justifiable.

Dr. Paul F. Mundé had found himself compelled, in a few instances, to deflect from the methods taught by Dr. Emmet, and make use of some which seemed somewhat superior. He classed the elements of success in plastic surgery under a few major heads: 1, Proper selection of cases; 2, selection of the right time to operate; 3, proper preparation of the parts; 4, perfect asepsis, involving strict cleanliness but avoidance of strong germicides; 5, rest, yet early movement of the bowels; 6, he could not agree with Dr. Emmet that the silver-wire suture was so universally necessary or useful. He employed silk for operating on the anterior vaginal wall, and silk-worm gut at the perineum. He disagreed with Dr. Emmet in condemning several operations performed at one time. By this means he had saved many patients much time, pain, and expense. He believed in the flap operation on the perineum.

Dr. H. J. Garrigues thought there were many plastic operations which could be combined, but he did not like to combine repair of the cervix with other procedures for the reason that hemorrhage might occur, as it had in one of his cases and necessitated steps that interfered with union of the perineum. He laid stress on antisepsis as a means of success. It was especially necessary to scrub the vagina. For complete laceration of the perineum he had found no operation so valuable as Tait's splitting operation, for which he used silk-worm-gut. Dr. Emmet's work seemed sometimes like magic; like spinning without flax or weaving without thread, so skilfully did he operate.

Reported Queer Doings of a Collecting Agency.—Dr. Byrne recounted some unfortunate experience with a certain agency which recently had been advertising widely the collection of physicians' bills, and moved that the President be authorized to appoint a committee of three to hear complaints. The motion was carried.

Hotel Sanitation.—The "Traveller's Association" of Vienna lately addressed a memorial to the Home Office, drawing their attention to a grievance seriously affecting that class in the approaching danger. Hotel proprietors, they say, do not recognize the present risk of allowing their water-closets, sheets, towels, etc., to become fouled. Though having all the appearance of being newly done up, the serviettes are merely damped with a few drops of water, pressed, and then returned to the table for use, under the base pretence of being clean, while they contain all the germs of saliva, etc., of a preceding user. The government has considered the matter and issued an order taking effect on the 21st inst., that all articles not properly disinfected, down to the drinking-utensils, will subject the proprietor to a severe penalty.—*Medical Press.*

"**The Chicago Clinical Review**" is the name of a new monthly journal. The first number contains several interesting contributed articles, and an editorial salutatory which looks as though it were written in English but which is absolutely unintelligible. Even our Chinese editor couldn't make it out.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, December 22, 1892.

ROBERT A. MURRAY, M.D., CHAIRMAN.

Accidental Hemorrhage in Pregnancy.—DR. JULIUS ROSENTHAL read the paper, and related a case in which the bleeding was partly external and partly concealed, and in which he applied the ice-bag to the abdomen, which caused the uterus to contract and the hemorrhage to cease.

DR. EDEBOHLS said he had not seen accidental hemorrhage during pregnancy, but he had seen two cases of exophthalmic goitre in women who suffered from uterine hemorrhage without any other apparent cause.

DR. CURRIER thought one should make certain that the hemorrhage was coming from within the uterus and not from the circular artery before placing reliance on the tampon.

Empty the Uterus at Once.—DR. GRANDIN said that inasmuch as the child, and perhaps the patient, was likely to die unless something was done immediately, he would favor, if the case were at term, emptying the uterus at once by any means not more dangerous than the emergency itself. If the cervix were softened and dilated, he would resort to *accouchement forcé*, a method which had enabled him to save not only the mother, but also the child, in a number of cases of hemorrhage connected with placenta prævia. Ordinarily in hemorrhage, especially if concealed, he would anæsthetize the patient, dilate (preferably with the hand), perform version, and after extracting the fœtus and placenta would tampon the uterus.

DR. COE said the great rarity of these cases was shown by the fact that at a recent meeting of the American Gynecological Society not more than half a dozen of those present had seen a case of severe accidental hemorrhage. Yet anyone was liable to meet with the accident in his next case, and should be prepared for the emergency. Irregular pains and constant pain in the lower part of the abdomen should excite suspicion. He now agreed fully with Dr. Grandin as to the advisability of *accouchement forcé*. But the extent of the shock, the severity of the impression produced upon the abdominal sympathetic nerves, would have to be considered, just as it had to be in general surgery, before proceeding with active interference.

Pelvic Suppuration after the Menopause.—DR. H. C. COE read a brief paper with this title, and gave the histories of two cases. Under the general term pelvic suppuration, he included purulent foci situated either in the ovary, tube, or pelvic cellular tissue. The menopause had rightly been regarded as the period of degenerative rather than of inflammatory processes. The two cases were reported because of the infrequent occurrence of pelvic suppuration at this time. The first patient was aged fifty five, the mother of several children; menopause ten years previously; had a uterine fibroid which had given little or no trouble. No other apparent cause for pelvic abscess than over-work. The diagnosis remained for some time obscure, typhoid and other general febrile affections being excluded. In time a well-marked induration could be felt in the inguinal region, occupying the ordinary position of a puerperal abscess. A few drachms of pus were evacuated from an extra-peritoneal abscess, and the cavity was packed with iodoform gauze. The sinus did not heal until a counter-opening was made into the vagina, an inch from the vulva, whereupon it soon closed.

The second patient was aged fifty-three, passed the climacteric eight years, mother of two children; had never before had any pelvic trouble; could give no reliable cause for her illness, which began in July, with chills and irregular elevation of the temperature. She then had apparently dysentery, and in August pus began to be discharged per rectum. Dr. Baruch saw her and recognized an enlargement in the left ovarian region, which became less distinct after a copious discharge of pus. The onset and decline of fever were clearly dependent upon the filling and emptying of the sac. Dr. Coe decided that the tumor was intra-peritoneal, near the uterus, and as the family would not permit of radical operation by median cœliotomy, he thrust a trocar into it from the vaginal fornix and was about to follow with an incision along the trocar into the tumor, when it collapsed, having evidently discharged into the rectum as on previous occasions. The patient had done well since.

Dr. Coe said the abscess in the first case was of ordinary extra-peritoneal variety, which nearly always was of puerperal origin, while in the second it was probably of ovarian or tubal origin. There probably had been previously an ovarian cyst, which became adherent to the gut and was infected, causing suppuration.

DR. SIMON BARUCH said the tumor had not reformed since Dr. Coe's last examination of the patient. He thought rectal injections of peroxide of hydrogen had had much to do with stopping the suppuration.

DR. BOLDT had seen suppurative pelvic disease after the menopause in three cases. As a rule, double drainage was necessary.

DR. CURRIER said vaginitis was not uncommon after the menopause, and he thought the inflammation might possibly extend to the uterus and tubes.

DR. COE thought senile vaginitis was not usually infectious, and would not extend to the tubes.

THE CHAIRMAN had seen pelvic inflammatien a number of times after the menopause, usually in hard-working women, but the induration cleared up and did not go on to the formation of pus.

The Faradic Current by the Bipolar Method in Gynecology.—DR. A. H. GOELET presented a new apparatus for administering the faradic current by the bipolar method, and explaining the facts in the make-up of the instrument necessary for success. One important point was the fineness of the wire and its length, for the greater its length the milder and more soothing the influence of the current. The number of breaks in the minute were also of importance. In most instruments on the market the wire was comparatively coarse and short, and the interruptions comparatively few.

[SECTION ON LARYNGOLOGY AND RHINOLOGY

Stated Meeting, December 28, 1892.

CHARLES H. KNIGHT, M.D., CHAIRMAN.

Disappearance of Epithelioma of the Tongue without Operation.—DR. J. E. NICHOLS reported a case of epithelioma of the tongue, with, however, some suspicion of its being syphilitic disease, and which disappeared without an operation.

DR. JAMES E. NEWCOMB said he understood that iodide of potassium was used in this case. He thought the benefit derived from this drug in malignant disease was due to its influence on the circulation, whereby it might cause disappearance of the inflammatory zone surrounding the malignant process.

DR. NICHOLS said the affection of the tongue in his case disappeared before iodide of potassium was administered.

Some Points on Malignant Disease of the Nose.—DR. H. B. DOUGLASS read this paper. General symptoms were spoken of as those which would be caused by the presence of any foreign growth in the nose, such as hypersecretion and headache of some form. Other symptoms somewhat more indicative of malignant disease were infiltration, hemorrhage, ulceration, and pain. He had found no authentic ground for believing that the pain of carcinoma differed from that of sarcoma. An early symptom of malignant disease was infiltration. Hemorrhage was significant of both carcinoma and sarcoma. Ulceration was usually more rapid in carcinoma

than in sarcoma, and was accompanied by an offensive discharge, sometimes thin and bloody, sometimes purulent. The characteristic symptoms of malignant disease related to the appearance, to deformity, age of the patient, deposits, and locality. Carcinoma, unlike sarcoma, had no characteristic color of the disease area, while it did cause in time a general cachexia. Sarcoma generally produced deformity by displacement of the normal structures and crowding forward, while carcinoma produced a destructive change by ulceration rather than by crowding and displacement. Sarcoma was more apt to develop on a previously existing tumor, as a fibrous or mucous polyp or cartilaginous growth, and usually originated well forward, while carcinoma was apt to start posteriorly, on the basilar process of the occipital bone, etc. A microscopic examination should be made to confirm the diagnosis, but more reliance was to be put upon the clinical history and gross appearances. Malignant disease, especially carcinoma, very rarely occurred primarily in the nose. The author related some cases collected from medical literature.

Dr. Robert Abbe was asked to open the discussion, and said he could not recall having seen a case in which cancer had originated within the nose. When present in this part of the face it was almost always by extension from the antrum or some surrounding parts. Sarcoma was more common, but this affection also was apt to be retro pharyngeal. Especial care was required in operating when it involved the basilar process of the occipital bone. Some years ago, at a clinic in Boston, several patients were presented in illustration of the curious fact that fibro-sarcomas, usually involving the basilar process, developing rather late in boyhood, and proving intractable to surgical treatment, were apt to disappear spontaneously about the twentieth year. Perhaps certain remedies had apparently succeeded in some cases because of this natural retrograde process. The fact also carried with it the lesson not to be in too great haste to operate.

Dr. Vanderpoel had seen but one case of primary sarcoma of the nose. It sprang from the middle turbinated on the right side, and had a large base. Dr. Vanderveer operated, but the final result could not be stated, as the patient remained under observation only two months. As usual in malignant disease of the nose, there was no involvement of the lymphatics of the neck. He laid stress on the necessity for radical removal, as was done in cancer of the breast and elsewhere.

Dr. Park referred to one case of malignant disease involving the nose—he did not say primarily—in which Dr. McBurney made the diagnosis of probable sarcoma, whereas the microscopic examination showed it to be carcinoma; and he knew of another instance in which the diagnosis of carcinoma was made, and it proved to be a sarcoma.

The Chairman, Dr. Knight, believed at present that the growths should either be let alone or be removed completely.

Dr. Herman Knapp had never seen primary carcinoma of the nose, but secondary involvement of the nose from cancer of the orbit or lachrymal region was not very infrequent. Its ravages then became often extreme, yet it might not kill for ten, twenty, or more years. In one case he performed a pretty extensive operation, making two artificial lids and closing the defect in the nose by skin and periosteum. There was no recurrence until nineteen years. Sarcoma might spring from the nose and go into the orbit, or spring from the orbit and go into the nose. In either case it was malignant to the utmost degree. He operated on one patient who had been operated upon fifteen times before. He lived eleven months longer, and then died of exhaustion. In another case he operated as thoroughly as he could, but the patient died within a week of purulent meningitis, and at the autopsy such extensive sarcomatous infiltration was found as would have positively debarred all hope of radical removal had its extent been previously known.

Referring to Dr. Abbe's remarks, he said there were cases pronounced by the pathologist to be sarcoma, which were not; nor could the benignant nature of the growths be known except by their subsequent spontaneous disappearance. One patient was operated upon for sarcoma originating in the posterior nares, by a surgeon in Springfield, Mass. There was rapid recurrence, and she saw Dr. Knapp, who advised against another operation in view of the rapid recurrence after the previous one, but advised her to keep the parts clean, live a regular life, etc. She came back in about six months to show him what electricity had done for her. The tumor had entirely disappeared, and she gave the credit to the electric current which some doctor had applied. In another case there was extensive involvement of the orbit, and a surgeon took out the eye. The diagnosis was confirmed by microscopic examination. The other eye became involved with a similar hard tumor which displaced the ball considerably. Dr. Knapp did not feel justified in advising the removal of this eye also, in order to accomplish radical treatment. Without special treatment the tumor entirely disappeared in the course of nine months, and there had been no recurrence after about six years. In another case there were tumors in both orbits, but also tumors of the skin which led to the diagnosis of Hodgkin's disease. All the tumors disappeared. He believed the tumors that disappeared spontaneously were lymphomas, but at present the differential diagnosis between them and sarcomas often could not be made except by the final result.

Dr. Wright, of Brooklyn, knew of no way to make the differential diagnosis positive between small round-cell sarcoma and granulation tissue, and adenoid growth in the throat. It was different with spindle-cell sarcoma, as nothing else looked like this under the microscope. Many tumors supposed to be malignant disappeared under the use of iodide of potassium, and this agent should always be tried before operating. He said he had sections of two cases of primary carcinoma of the nose, and thought he had seen five or six cases of primary sarcoma of the nose within as many years. The more radical any operation, the better were the patient's chances of cure.

Dr. W. C. Phillips said he had never seen primary carcinoma of the nose, and wished to know of Dr. Wright where the growth had started in his cases. He had seen a case of what he believed to be sarcoma of the antrum, but the patient refused an operation until too weak. An autopsy was not permitted.

Dr. Wright replied that it was difficult to say just whence the growths had started, whether from the basilar process or elsewhere.

Dr. Douglass expressed the hope, in closing, that Dr. Wright would report his cases in detail.

Dr. Charles H. Knight was re-elected Chairman, and Dr. Wendell C. Phillips, Secretary.

The Preservation of Vision.—Dr. Webster Fox has formulated the following propositions as an aid to the preservation of vision (*The Sanitarian*. November, 1892): 1. Do not allow light to fall upon the face of a sleeping infant. 2. Do not allow babies to gaze at a bright light. 3. Do not send children to school before the age of ten. 4. Do not allow children to keep their eyes too long on a near object, at any one time. 5. Do not allow them to study much by artificial light. 6. Do not allow them to use books with small type. 7. Do not allow them to read in a railway carriage. 8. Do not allow boys to smoke tobacco, especially cigarettes. 9. Do not necessarily ascribe headaches to indigestion, the eyes may be the exciting cause. 10. Do not allow the itinerant spectacle vendor to prescribe glasses.

Woman is the unmaking of man, but the making of the doctor.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

SUBACUTE PULMONARY ŒDEMA AFTER PLEURAL EFFUSION — SPLENECTOMY — SUPRAVAGINAL AMPUTATION OF CERVIX UTERI FOR CANCER — IRREGULAR HEART — THE CHOLERA — DEATHS OF DRS. THOMAS HAWKSLEY, JAMES H. AVELING, AND HAYLE WALSHE.

LONDON, December 17, 1892.

THE work of the medical societies has been unusually active of late, both as regards the variety and the quantity of material brought forward and discussed. Space will only allow me to summarize briefly some of the more interesting communications. At the Clinical Society's last meeting Dr. James Calvert described a case in which subacute œdema of the left lung followed the withdrawal by aspiration of forty five ounces of pleural effusion. Partial expansion of lung above the fourth rib took place after the aspiration, but two weeks later the lung above the fourth rib became œdematous; there were abundant subcrepitant râles, with profuse expectoration of gray, frothy, watery fluid. The œdema persisted for three weeks, and then began to decline gradually. The temperature was normal throughout. Dr. Calvert thought the œdema was probably due to obstructed venous return in a lung held by adhesions, and endeavoring irregularly to expand in presence of a diminishing effusion. A practical point was that these crepitations, limited to one apex, and persisting for weeks, were not due to phthisis.

Mr. Bland Sutton gave an account of a case of wandering spleen for which he performed splenectomy. The patient recovered. The spleen weighed sixteen ounces, and was quite normal in texture though unusual in shape.

At the last meeting of the Medical and Chirurgical Society Dr. Lewers read a paper on supravaginal amputation of the cervix uteri for cancer. He had operated on nineteen cases, and the mortality of the operation was *nil*. He laid stress on the importance of making a careful examination, under anæsthesia, in doubtful cases, with the view of determining their fitness or otherwise for operation. It was important to make the preliminary incisions for clearing the cervix as far as possible from the diseased tissue, and to remove the cervix in an anatomically complete condition at the level of the interval os. He thought there was but little risk involved in opening Douglas's pouch during the operation. Dr. Lewers also drew attention to the value of applying the cautery freely to the "bed" from which the cervix had been dissected out, and of cutting off the cervix from the body, after it had been cleared, with the cautery rather than the knife or scissors.

Mr. Jessett said the immediate results of the supravaginal operation for the removal of the cervical portion of the uterus were much more favorable than those of the operation for total extirpation of the uterus. In the years 1889 to 1891 he had performed the former operation twenty-four times, with one death; statistics of total extirpation gave a mortality of about sixteen per cent. He thought it was advisable in the supravaginal operation to remove a core shaped piece from the body of the uterus instead of separating the tissues straight across just above the internal os. He preferred scissors or knife to cautery.

Dr. Champneys said one practical point had to be remembered when the disease was high up and the cervix was enlarged, viz., that in endeavoring to pull the parts down within reach they were liable to be torn if much diseased; this was an unfavorable condition, and in any such case total extirpation of the organ would probably be the right method to pursue.

Dr. Routh advocated removing the cervical portion by means of the *écraseur* or electrical *écraseur*, or by cautery, with subsequent destruction of the parts with caustics, especially with bromine.

Mr. Hulke and Dr. Heywood Smith thought that the cautery was liable to hide the true condition of the tissues.

Dr. Amand Routh mentioned a case in which the growth, when first seen, had appeared to be too far advanced for operation, but a microscopical examination showed that it was a case of simple adenoma with a little proliferation of some of the epithelium cells. The parts were removed and no recurrence took place.

Dr. Herbert Spencer referred to a paper by Dr. Byrne, of New York, in which the statistics showed that the mortality after the operation for total extirpation was 14.5 per cent., while after the supravaginal operation it was only two or three per cent. Dr. Byrne had used the galvano-cautery in his own practice, and had had four hundred cases without a death from the operation. Dr. Spencer, however, said he agreed with Mr. Jessett that removal by cutting was preferable to removal by cautery or any other method. He had once seen pyometra when the removal had been effected with scissors, and thought it was even more likely to occur if the cautery was employed.

Dr. Lewers then replied. He said he did not see any advantage in removing a cone-shaped piece from the body of the uterus. If the disease had progressed so far as to render it essential, he preferred to extirpate the organ totally. He had had no experience in using a stem for the parts to heal upon, and had never known absolute occlusion so that the menstrual discharges could not escape, but he had noticed that dysmenorrhœa had been more severe after than before the operation. If retention should occur, it could always be relieved by incision.

At the Medical Society of London, Dr. Sansom read a paper on "Irregular Heart," based on a study of forty-seven cases. He distinguished this condition from "paroxysmal hurry." He reiterated his former conclusion that the cardiac manifestations constituted the central feature of Graves's disease, the other troubles being merely offshoots. His observations related exclusively to long-standing cases of persistent irregularity, and did not bear on cases of arhythmia dependent upon or associated with valvular or other structural lesions of the heart. His cases comprised 37 in which the cardiac phenomena existed alone, and 10 of undoubted Graves's disease. The cardiac irregularities comprised—1, intermission; 2, the alternating pulse; 3, coupled and linked beats; and 4, external arhythmic irregularities. The etiological associations of these forms of cardiac irregularity were—1, dyspepsia; 2, syphilis; 3, osteo-arthritis; 4, disturbance of the organs of hearing and naso-pharyngeal irritations; 5, influence; 6, mental disturbances and the effects of severe nervous shocks; and 7, a group of cases without any of the foregoing associations, in which the symptoms were so complex as to render classification difficult. Dr. Sansom said that in only two cases did an acute disease—pleurisy—appear to have initiated the cardiac arhythmia, and in only one did it appear probable that the irregularity was attributable to cardiac overstrain. He remarked that all forms of irregular heart were met with in cases of disturbance of the cardiac nervous system. In Graves's disease rapidity of the heart-beat was more frequently met with than irregularity.

Dr. Sansom's paper was discussed by Drs. Richardson, Maude, Woakes, Pasteur, Thorowgood, Stephen Mackenzie, Solomon Smith, and Allchin. Dr. Richardson said he had given a good deal of attention to the particular variety of cardiac irregularity characterized by intermittency. This might be due either to failure of the sympathetic nervous system or to overstimulation of the vagus. When it existed it was usually persistent, and, as a rule, the patient himself was not conscious of the irregularity. Dr. Pasteur reported the case of a woman

who exhibited extreme tachycardia when he first saw her. A week later this had given place to an extreme form of cardiac irregularity. In the recumbent position the pulse at once fell to normal. The irregularity ultimately disappeared. Dr. Stephen Mackenzie pointed out that these irregularities were also associated with acute conditions such as uræmia, and then constituted an indication of great significance.

In view of the expected return of the cholera next year, the Local Government Board are about to renew the cholera survey of port and other coast sanitary districts carried out last summer. Two additional medical inspectors are to be appointed.

The deaths are announced of Dr. Thomas Hawksley, Dr. James H. Aveling, and Dr. Hayle Walshe. The latter was formerly physician to University College Hospital and the author of standard works on diseases of the heart and lungs.

SUSPENSION IN SPINAL CORD AFFECTIONS.

To the Editor of the Medical Record.

Sir: In the Record of November 26th my former teacher, Dr. Dana, states that "stretching" in locomotor ataxia had been given up in Washington. I think he must be in error. During my temporary residence as house physician in Dr. Hammond's Sanitarium the past summer it was my custom to practise the suspension treatment daily, under his direction, in a number of spinal affections. In cases of antero-lateral sclerosis there was marked improvement in locomotion in every instance after suspension. One patient with syringo-myelia, as diagnosed by Dr. Hammond, was sent to his Texas home perfectly cured, suspension, electricity (static), and iodide of potassium being the remedies used. In anaphrodisia, suspension, with sodium, cantharides, strychnia hypodermically, together with static electricity, made cures without any failure. We had no case of locomotor ataxia during my term of service, but I am convinced that suspension would have been used systematically had such cases presented. Dr. Hammond is one of those who believe that the cord itself is stretched in suspension. We used no shoulder-straps, and after a few treatments would raise the patient entirely off the floor and hold him in complete suspension for a minute or more. This treatment, though rather trying for the minute, is eagerly sought after by the patients, who all found great benefit from it; and then it felt so good—when they got down.

J. M. Hays, M.D.

Oxford, N. C., December 11, 1892.

CAN A GIRL CATHETERIZE HER OWN UTERUS?

To the Editor of the Medical Record.

Sir: At a trial in this city for alleged abortion, testimony was presented by the defence to prove that the girl had produced the abortion herself by introducing into the uterus an ordinary hard rubber catheter. The testimony, as given in court, was that a girl, sixteen years of age, and two months pregnant, went to the room of another girl, and there, in the presence of two or three girls of the "lady friend" kind, drew from her stocking a catheter a little smaller than a lead-pencil, raised her clothing with one hand, placed one foot upon a chair, and with the other hand, after removing the stylet from the catheter, introduced the catheter into the vagina and up into the uterus, thereby producing the abortion.

The testimony showed that the extent of the girl's immoral acts had been that she had had sexual intercourse with a bootblack of about her own age eight times. The question which was submitted to medical experts was, whether it was possible for a girl of slender build, sixteen years of age, with a normal vagina, normal cervix filled with the mucus of pregnancy, to place one foot upon the chair, hold the clothing with one hand, and with the other hand introduce an ordinary hard-rubber catheter, without its stylet, and at the temperature of the body, up into the vagina, through the cervix, and into the uterus? For the State, the three physicians who made the autopsy upon the girl, and who had been present during the three days' trial, testified that in their opinion such an act was not possible.

The defence asked for and was granted time in which to secure medical opinion upon the subject, and soon placed upon the stand three physicians, each of whom testified that the position designated would facilitate the introduction of the catheter into the uterus. One said that such an act was easily possible, one that it was possible, and the other that to be successful the girl would have to guide the catheter with a finger.

The character of the witnesses who testified that they saw the act is such that, if the act is possible, they are doubtless familiar with its practice. On the other hand, if there is a popular belief that an abortion can be and often is produced in that manner it is easy to see that this class of witnesses could readily be induced to furnish the fabrication of the desired evidence. No physician ever saw the thing done, and the medico-legal question as to the possibility of the procedure is new to this city.

J. L. Tracy, M.D.

Toledo, O., December 10, 1892.

SURGICAL SOAP.

To the Editor of the Medical Record.

Sir: In view of the fact that to-day cleanliness is next to godliness to every good surgeon, and that time is a desideratum which cannot be ignored in preparing ourselves for our surgical work, I believe that the accompanying formula for a liquid soap mixture meets the above indications better than any preparation of soap in the market. I have been experimenting for over a year, and have found this agreeable, effective, and economical. It cleanses the hands and removes the accumulations under the nails in the shortest possible time, quicker than anything else I have ever tried. The alcohol assists in this, while the glycerine renders the skin soft after the hands are dried. The strong alkali of the green soap may possibly act as a mild germicide, but it should not be depended upon to the exclusion of those fluids which are known to be absolutely germicidal.

In the formula I have given, preferably to myself, oil of rose geranium for a scent to overcome the sometimes disagreeable fishy odor of the green soap, but the same quantity of oil of wintergreen, or peppermint, or bergamot, as preferred, will serve equally well.

3 parts best commercial green soap.
1 part 95 per cent. alcohol.
1 part glycerine.
1 part water.
1 drachm oil rose geranium to each part of alcohol.

Very truly yours,
Horace Tracy Hanks, M.D.

December 19, 1892.

"HONOR TO WHOM HONOR IS DUE."

To the Editor of the Medical Record.

Sir: My attention has just been called to a paper in the Medical Record for December 3d, entitled "The Achievements of American Surgery," by Frederick S. Dennis, M.D., New York, read before the New York Medical Association at a late meeting.

While the paper to which I allude and take exception reflects much credit upon its talented author for its research, breadth, scope, and general correctness, it nevertheless does injustice to the world's greatest public benefactor, William Thomas Green Morton, M.D., the discoverer and demonstrator of etherization.

"He discovers who proves," says Bishop Paley, and that was precisely what Dr. Morton did, and no other man.

Dr. Dennis would have us infer from his learned and valuable paper that Dr. Crawford W. Long, of Georgia, was the first to discover and demonstrate painless surgery by etherization, which statement is not true, and more than Dr. Long claimed for himself. I give his own statement in regard to the discovery: "I had no opportunity of experimenting with it (ether) in a capital operation, others more favorably situated engaged in similar experiments, and consequently the publication of etherization did not bide my time."

Such a frank and manly statement and explicit denial of the discovery of etherization ought to be conclusive. Notwithstanding the facts in the case, Dr. Dennis persists in giving the credit of the discovery of etherization to Dr. Long.

Continuing his classification, Dr. Dennis gives the first place of honor to Dr. Jackson, who only claimed to have suggested ether to Dr. Morton, which all the evidence in the case disproves. Dr. Dennis gives second place to Dr. Morton, and third to Dr. Wells. The facts in the case are summed up in a few lines.

On October 16, 1846, the eminent surgeon, Dr. John C. Warren, of the Massachusetts General Hospital, Boston, performed a capital operation upon a patient while under the influence of etherization, the ether being administered by Dr. Morton, who had obtained the consent of Dr. Warren. The operation was a brilliant success. On that glorious morning was made the first public demonstration of painless surgery by etherization, and the instrument for so doing, in the Divine hand, was William Thomas Green Morton, M.D., of Boston, to whom the world will ever owe a debt of lasting gratitude.

It should be remembered that the after claimant was not present at the operation, he had never made one, had never seen one, nor had he suggested one.

The seven eminent surgeons of the Massachusetts General Hospital who were present at the first operation under anæsthesia were all the neighbors and intimates of Dr. Charles T. Jackson, yet not one of them gave the credit of the discovery to him, but solely to Dr. Morton. Dr. Jackson made no claim to the discovery, or to have suggested ether until after the great success of the operation was established; on the other hand, he disclaimed and denied any hand in it. So much by the way of the history of etherization.

Dr. Jackson did lay claim to the discovery of Morse's electro-magnetic telegraph, which the Hon. Amos Kendall, then Postmaster-General, disproved.

The MEDICAL RECORD is considered high medical authority by a large body of the medical profession, and a reliable history of the progress and science of medicine from year to year, and will be quoted when the present generation shall have passed away, and so will Dr. Dennis's valuable paper, hence the great importance that the statements in it should be reliable.

I have no doubt of the good faith of Dr. Dennis, but his remarks in regard to Drs. Long, Jackson, Morton, and Wells are misleading, and do great injustice to Dr. Morton.

Hon. Joseph Burnett and John T. Metcalf, of Boston (both now living), testify to having sold Dr. Morton the ether with which he made his experiments, and they give no credence to Dr. Jackson's claim, although they were personally acquainted with him. As for Dr. Wells, he made some unsuccessful experiments in tooth-pulling with nitrous oxide (*vide* the evidence of the late Professor W. H. Van Buren, of the University of New York). To build a monument to Dr. Wells is to cheapen all such testimonials.

It is true that Dr. Morton died poor, working in one of the noblest causes ever intrusted to man—the alleviation of human suffering. He died an honest, natural death (apoplexy). "*Requiescat in pace.*"

To Dr. Morton his country owes great honor and reward for his work, for it has shed an unfading lustre upon his profession, a glory upon this nation unequalled by any other man who has ever lived, a blessing upon mankind that no man may ever hope to equal. Every man, woman, and child on this great globe is his debtor, and his name shall always be blessed among all people.

Other nations have heaped honors and rewards upon discoverers of things of doubtful and undemonstrated efficacy, but what has the American Government done for her noble son whose name is immortal?

W. R. HAYDEN, M.D.

BEDFORD SPRINGS, MASS., December 16, 1892.

HEREDITY AND CONTAGION IN RELATION TO PHTHISIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the RECORD of December 3d, page 651, appears a statistical article by Dr. Solly, from which I quote: "Of the 141 cases (of phthisis) 58 per cent. showed a family predisposition toward phthisis; the percentage of improvement among these was 69, while among the non-hereditary cases it was 61.4 per cent." Being somewhat astonished by this showing, I restudied my own statistics (*Southern California Practitioner*, vol. 6, p. 551) for the purpose of comparison. To this end I have examined the histories of 329 consecutive cases. Of these only 172 are available. The records of the remaining cases are not sufficiently specific regarding the point at issue. I have divided these cases (172) into three sections: First, those in whom careful inquiry failed to demonstrate any hereditary element whatever, to wit: 65 cases, or, 37.8 per cent. Second, those showing direct heredity, *i.e.*, phthisis in one or both parents, 51 cases, or 29.7 per cent. Third, those having a history of collateral heredity, viz.: aunts, uncles, brothers, sisters, numbering 56 cases, or 32.5 per cent. Thus, an hereditary element was discerned in 62.2 per cent. of the cases. As regards prognosis, my cases display a marked advantage in favor of the non-hereditary type, in which the death-rate was 36 per cent. Where collateral heredity existed, 48 per cent. died; while of the directly hereditary, 51 per cent. died. The cures maintained about the same relative proportion, being, respectively, in the three divisions, 34 per cent., 30 per cent., and 24 per cent. Those recorded as improved (aside from cures) display the same tendency.

The following is a complete table:

	Non-Hereditary.	Direct Heredity.	Collateral Heredity.
Lost sight of	3	3	1
Became worse	2	.	1
No visible change	5	6	5
Died	23	26	27
Improved	10	4	5
Cured	22	12	17
Total	65	51	56

I regret that I am unable to present statistics of the whole 329 cases, because the percentage of improvement and cure would thereby make a much better showing. However, the question at issue is one of prognosis. These cases have been under my notice for from one to nine years. Dr. Solly is a well-known and an exceedingly careful observer; his conclusions are entitled to serious consideration. Nevertheless, I am convinced, apart from the record of either his cases or mine, that heredity has a decidedly unfavorable influence over the prognosis of phthisis. Another problem, that of contagion, received my attention. I have selected all the cases in which the patient was exposed to close contact with the disease, prior to manifesting it in person. Of the non-hereditary cases only four were so exposed, two wives, one husband, and a father, lived in close relation with and nursed husbands, wife, and daughter, respectively. In the section of collateral heredity, four sisters, two brothers, one wife, and one keeper of a boarding-house for invalids were so exposed. Among those in whom heredity was direct, five sons, two brothers.

Three daughters and one sister had nursed their respective relatives. The conclusion from these very limited data is that heredity predisposes to contagion.

Respectfully,

JOHN C. KING, M.D.

BANNING, CAL., December 18, 1892.

THE DRIPPING SHEET.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In an address recently delivered by Professor S. Weir Mitchell, before the New York Academy of Medicine, on "Precision in the Treatment of Chronic Disease," published in your valuable paper, December 24th, the learned author, referring to the dripping sheet, speaks as follows: "I cannot help adding that several of the most useful of the water procedures are neither taught in our schools nor so accurately in hydro-therapeutic text-books as to be of much value to the general practitioner." Permit me to call the attention of your readers, and of Dr. Mitchell, to Dr. Baruch's work on "The Uses of Water in Modern Medicine," in which ten pages are devoted to a description of the dripping sheet, with two excellent illustrations showing its manner of application. If Dr. Mitchell had perused the pages of this book before writing his paper he would certainly not have made the statement quoted above.

Yours truly,

P. J. ROSENHEIM, M.D.

NEW YORK, December 29, 1892.

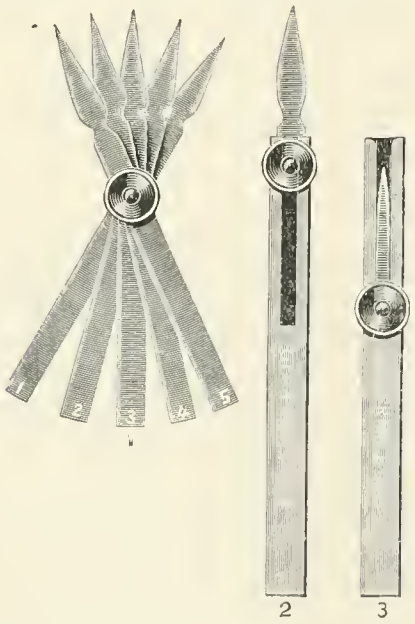
New Instruments.

A NEW VACCINATING KNIFE.

BY ALBERT POHLY, M.D.,

CLINICAL ASSISTANT AT THE POST-GRADUATE MEDICAL SCHOOL, NEW YORK.

MY dispensary practice has given me the opportunity to vaccinate a good many little patients. For this procedure I have used different instruments, *e.g.*, the scarifier, single vaccinating knife, etc., but found in all of them the disadvantage of either taking too much time and therefore making the children restless, or of being very complicated and difficult to be kept antiseptic.



These disadvantages induced me to construct a new instrument, which I have now the pleasure of presenting to the profession. It is of very simple construction, and consists of a metal handle and five little sharp knives which are attached to a screw, and can thereby be regulated to any suitable length. The knives are numbered and can easily be taken out for cleaning.

It also has the advantage of taking only one-fifth of the time of our other instruments, as with each cut there will be made five little incisions.

This instrument was made for me by Mr. George Ermold, of this city, and I hope that it will prove serviceable to the profession.

116 EAST NINETIETH STREET.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 31, 1892.

	Cases.	Deaths.
Typhus fever	12	D
Typhoid fever	11	12
Scarlet fever	103	8
Cerebro-spinal meningitis	1	2
Measles	93	12
Diphtheria	118	49
Small-pox	4	1
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

Commitment of Lunatics.—Dr. Carlos F. Macdonald, State Commissioner in Lunacy, points out some popular errors in a recent letter to the New York *Times*, bearing upon the commitment of an insane person to the Hudson River State Hospital, on an alleged false representation. He says among other things: "It will be seen that under the present regulations it is practically impossible to secure the continuous detention in any institution for the insane in this State of any person who is not a fit and proper subject for commitment. Even in the Rappaport case, where it appears that the certifying physicians had failed to qualify with the commission, there was evidently no wrongful intent, the case being a proper one for commitment and the physicians having acted in entire good faith, but in ignorance of the law of 1889. In refutation of the popular delusion respecting the ease and frequency with which sane persons are committed to asylums for the insane, the assertion so often flippantly made that almost any two doctors can be induced for a consideration to certify to the insanity of a sane person, in order to enable his relatives to get him out of the way, does the medical profession a great injustice. During the more than twenty years that I have been professionally connected with hospitals for the insane, also in my official capacity as the medical member of the Commission in Lunacy, I have had occasion to examine thousands of cases in custody—either at the request of others who thought them sane, or frequently at the solicitation of patients themselves—and I have yet to find a single case of whose insanity I had any reasonable doubt, except in certain convalescent patients who were about ready to be discharged as recovered. I have, however, known of cases in which the commitment papers were defective, and also, though very rarely, instances of mistaken diagnosis, in which the delirium of fever, alcohol, etc., has been mistaken for insanity proper and the case sent to an asylum. But, to the credit and honor of the medical profession, be it said, I have yet to find an authenticated instance of a sane person being certified as insane, and incarcerated in an asylum through fraud, corrupt collusion, conspiracy, or wrongful intent on the part of medical men."

Intra-Thoracic Auscultation.—Mr. Richard Neale writes to *The Lancet* that the method of intra-thoracic auscultation, recently proposed by Dr. Richardson, was described by Bianchi in 1888 and by Giorgeri in 1889.

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Original Articles.

PELVIC SUPPURATION AFTER THE MENOPAUSE.[1]

By HENRY C. COE, M.D., M.R.C.S.,

NEW YORK.

UNDER the general term "pelvic suppuration" the writer includes purulent foci, situated either in the ovary, tube, or pelvic cellular tissue. In a broader sense it has been held to include suppurative processes in pre-existing neoplasms, such as cysts and solid tumors, though this is hardly accurate. We are accustomed to refer the development of pelvic abscess to the period of functional activity, when the patient is most exposed to the influences of acute congestion and infection, either septic or specific. The menopause is rightly regarded as the period of degenerative, rather than of inflammatory, processes. The infrequent occurrence of pelvic suppuration at this time causes some interest to be attached to the two following cases, a condensed report of which is appended.

CASE I.—The patient, aged fifty-five, and married, the mother of several children, was seen, with Dr. Walter Mendelson, in July, 1891. She had a fibro-myoma of the uterus, the size of a man's head, which had given her so little trouble that she is still unaware of its existence. The menopause was established ten years before, and she had always been in good health, without pelvic symptoms. She attributed her trouble to over-exertion while attending to household duties, nor could any other cause be discovered. The initial symptoms were chill and elevation of temperature, without sufficient general or local disturbance to lead her to call her physician until a week later. There was at first slight sensitiveness on pressure in the left inguinal region, but never severe pain. The diagnosis for some time remained obscure, typhoid and other general febrile affections being carefully excluded. Appendicitis was also regarded as improbable, because of the location of the pain (in the ovarian region) and the absence of serious symptoms. The pulse was seldom much accelerated, although the evening temperature not infrequently reached and exceeded 103° F. The usual evidences of sepsis were absent. In time a well-marked induration could be felt in the inguinal region, which later could be mapped out by the bimanual exploration, though it was distant from the vaginal fornix. It occupied the ordinary position of a puerperal pelvic abscess, and although fluctuation could not be detected, the presence of pus was inferred and an operation was deemed advisable. Dr. W. T. Bull saw the patient, supported this decision, and made an incision directly over the induration about a month after the inception of the trouble. A few drachms of pus were evacuated from an extra-peritoneal abscess, and the cavity was packed with iodoform gauze. The patient's condition was much improved, but the sinus did not heal until I made a counter-opening in the right lateral wall of the vagina, an inch from the vulva, a month after the original operation, when it soon closed. On examining the patient a few days since, I found no trace of the induration at the site of the sinus.

CASE II.—Widow, aged fifty-three, passed the climacteric eight years before I saw her, for the first time, with Dr. S. Baruch, in October, 1892. She had two daughters, and had never had any pelvic affection; her general health being excellent. Could assign no cause for her present trouble, unless it might have been due to a fall in June, although she remembered that she had pain in the left side as far back as Christmas, 1891, following a slight injury from making a misstep while descending the stairs. The latter part of July she began to have chills and irregular elevations of temperature, and had had what was apparently a dysentery, lasting six weeks, during which she came under Dr. Baruch's care. Pus began to be discharged per rectum early in August. He early discovered an enlargement in the left ovarian region, which became less distinct after a copious discharge of pus.

The dysenteric discharges ceased in September, but the patient continued to have afternoon chills at irregular intervals (sometimes two or three days elapsing without any), her temperature frequently rising to 103° or 104° F., though her pulse seldom exceeded 100 and her general condition was good. Dr. Baruch made a diagnosis of abscess, communicating with the bowel, which was confirmed by Dr. Loomis. The onset and decline of the fever, as well as attack of localized pain, were clearly dependent upon the filling and emptying of the sac.

I saw the patient, for the first time, October 4th. She was in fair condition, without the usual facies of long-continued sepsis. Palpation of the abdomen revealed a mass, apparently the size of a small orange, in the left inguinal region, obscurely fluctuating and quite tender to the touch. On account of the nervousness of the patient, the bimanual was not satisfactory, but I was able to depress the mass into the left lateral fornix, so that I could touch it with the examining finger, but not determine its exact relations to the uterus. Recalling the former case, I thought that this might be a similar one, and that the pus-sac could be reached by a lateral incision. On the following day the patient was anæsthetized and I made a careful examination, when I found that the abscess was intra-peritoneal and was in close proximity to the left horn of the uterus; it was not larger than a Messina orange, and was clearly not to be reached from above except by median cœliotomy, which was entirely out of the question, a radical operation being strongly opposed by the family. Depressing the sac as much as possible, I thrust an aspirating-needle into it from below, and found that it was situated some distance above the vaginal fornix. When about to cut down upon the needle, the sac entirely collapsed and could no longer be distinctly located, so that I did not think it wise to make an incision. The communication with the bowel could not be discovered. The patient had no reaction, and as she passed a quantity of pus per rectum on the following day, it was evident that the sac had been emptied in the usual way.

The effect of the manipulation was unexpectedly favorable. The patient had chills and fever for a few days, and continued to discharge pus by the rectum, though the abscess did not refill as much as before. She then began to improve, and when I saw her, on December 4th, her temperature had been normal for three weeks, the pain had entirely ceased, and she was up and about. A bimanual examination showed a mass at the side of the uterus, not larger than an English walnut. The patient had no pain whatever during the examination, but the

[1] Read before the Section on Obstetrics of the Academy of Medicine, December 22, 1892.

same afternoon had two chills, and her temperature rose to 102.5° F., but soon declined, and the next day she felt as well as before.

On reviewing these cases—interesting by reason of the age of the patients, not the anatomical condition—it is evident that in the first the abscess was of the ordinary extra-peritoneal variety, which is nearly always of puerperal origin, while in the second it was probably of ovarian or tubal origin. I can assign no satisfactory explanation of the cause of the suppuration in either instance. We are now accustomed to refer pelvic abscess to sepsis rather than to cold or traumatism, and yet it is difficult to assign it to the former cause in either of these cases. Although there was no history of previous pelvic trouble (except the presence of the fibroid tumor in Case I.), I am inclined to believe that in the second case there was a pre-existing ovarian cyst adherent to the rectum (and perhaps also to the bladder (?)), which may have become infected from the side of the bowel, since a slight injury would hardly have caused it to suppurate; this seems more probable than to infer that it was of tubal origin. I can hardly believe that the abscess, if ovarian, was primary. I have on former occasions called attention to the possibility of secondary infection through the adjacent bowel—a fact since demonstrated bacteriologically in the case of pyosalpinx by Dr. Hunter Robb of the Johns Hopkins Hospital.

The differential diagnosis of pelvic abscess in elderly women naturally presents more difficulties than in younger subjects, since the condition is one that we do not ordinarily expect to encounter. In Case I. the existence of appendicitis was regarded as quite probable, and in Case II. the discharge of pus from the rectum would, by one not familiar with pelvic pathology, have been referred to colitis. One of the acute febrile affections (typhoid) may be suspected at first. The prognosis must be somewhat more guarded than in a clear case of pelvic suppuration in a young woman, where the diagnosis is more certain; still, in healthy subjects, it is good.

The treatment is governed by the ordinary rule of surgery, *Ubi pus, ibi evacua*, with this exception, that in private practice, at least, we shall doubtless be less inclined to perform median cœliotomy in a case of intro-peritoneal abscess if less radical treatment can be substituted for it. In Case II. I proposed to open the abscess according to the method proposed by Landau for draining pyosalpinx per vaginam, *i.e.*, to puncture and incise the sac through the posterior fornix, and if found to be movable, or not to be directly in contact with the vaginal incision, to promote adhesion of the sac and fornix by securing the edges of the wound temporarily with forceps, and packing the abscess cavity with gauze. If the sac already communicates with the rectum, as in the case reported, and the rectal opening is inaccessible, a cure is hardly to be looked for unless a counter-opening is made per vaginam, although manipulation may set up an inflammatory process within the sac and cause an actual diminution in its size, which I believe has actually occurred in the present instance.

The Title of Doctor in Germany—The *British Journal of Dental Science* says: "Several American dentists in Germany have been fined by the courts for using the title 'Doctor.' The only titles of 'Doctor' recognized in the Empire are 'Doctor of Medicine,' 'Doctor of Law,' 'Doctor of Theology,' and 'Doctor of Philosophy.' It has been held by the courts that anyone practising as dentist and using the title 'Doctor,' although he may possess such a diploma as Doctor of Theology, implies that he is a Doctor of Medicine, thus misleading the public. This will prevent those dentists holding the D.D.S. or D.M.D. diplomas calling themselves 'Doctor.'"

"A Monstrous Excrescence on Modern Scientific Pathology," is what Dr. John Knott calls the Koch consumption cure.

COCAINISM.

By J. B. MATTISON, M.D.,

BROOKLYN, N. Y.

(Continued from Vol. xlii., p. 477.)

The seventeen cases here cited make a capital clinical picture of the mind and body havoc caused by chronic cocaine taking. They emphasize the peril of careless using, and the need of caution in every case.

Luff: Male. A five per cent. solution was applied by brush to nasal membrane to relieve catarrh. The effect was so seductive that the patient continued it for three years, with occasional short intervals, using five to eight grains per day. It caused insomnia, bowel torpor, gastric and heart derangement, indecision, inaptitude for work, and proneness to seclusion. Its quitting, under medical care, was followed by great depression and strong desire to recur, but under massage and tonics, in six weeks he recovered.

Lanphear: Physician. Hay-asthma; three years addiction, at first irregular, now steady. Eight grains daily by snuffing, in solution. Anorexia and emaciation were the prodromic signs of the cocaine disease. As further proof, any attempt to decrease the dose caused great nervousness, mental depression, weakness, vertigo, and other symptoms quite like those of abstinence in the morphine disease.

Ring: Physician, aged twenty-five. Cause, naso-pharyngeal disease; using spray, four per cent. solution, nightly, one drachm, two grains. At the end of a month effect less, and increase needed. Already insomnia noted. At end of fourth month increased frequency of taking; later, growing insomnia and anorexia. Still further increase—four or five times before retiring, and once during day. Decreasing appetite, nerves unsteady, staggering gait, temperature higher, heart quicker; becoming listless, no interest in work or friends. Now realized the drug becoming a necessity, and quit.

Atwood: "Physician, young, vigorous, and intelligent. Habits pure and manly. No one better than he knew the insidious and pernicious influence and effect of "the devil's own drug," and yet he was rapidly becoming a cocaine habitué, when, fortunately, I suspected the *raison d'être* of his peculiar conduct and succeeded in arresting the downward tendency of a most estimable gentleman and worthy physician. The origin was in my prescribing for him a powder of cocaine and bismuth subnit. in the treatment of an annoying coryza, which was used by snuffing. Unfortunately the doctor experienced instantly the stimulating and energizing influence of the drug upon both mind and body, and as in other cases, continuing it. Naturally this gentleman was reticent and dignified. At once, on taking the drug he became loquacious and boyish, talking rapidly and constantly, while his muscular structures, stimulated to action, manifested extreme restlessness. The exhilarating influence generated ideas of great physical strength, the existence of which he was persistently anxious to demonstrate to every one, male and female. These phenomena, so foreign to the ordinary conduct of the doctor, attracted attention and comment, and gave rise to the opinion that he was drinking alcohol in some form. Suspecting the real cause, I charged him with having become addicted to cocaine. He immediately confessed such was the case. He was loud in his praise of the drug's wonderful influence, but lamenting his folly, at once quit its use, and has since totally abstained."

Clark: "In July, 1885, a young man applied to me for relief from what he called a 'severe and persistent case of hay fever.' He had consulted a large number of physicians without obtaining relief. He claimed he only wished help for a time, until he could arrange to leave for the West, having lost hope of cure in this climate. I prescribed cocaine muriate, 8 grains; aq. camph., 6 drops; aq. distil., 1 ounce; with directions to pour a small quantity in the hand and snuff occasionally.

Three or four days later he appeared at my office, his face radiant with hope that he had found a specific, and said he had felt better the last few days than for a year. He had exhausted his medicine, and I consented to having the prescription refilled. I heard no more of the case till in November, I was in a drug store and was asked, 'Do you know Mr.—— is using about $8 worth of cocaine a week?' I expressed surprise, forbade further sale, and at once called, but failed to find the young man. I then asked his parents if they were aware of their son's excess. They said they were not, but had noticed peculiar symptoms which alarmed them. I explained the case and expressed doubt of serious result if the drug were at once ended. I was mistaken; the young man became insane, and required three months' strict supervision."

The doctor adds: "This case has given me such positive proof of a lurking danger in the use of cocaine, that all the negative evidence or hypothetical assumptions, published or adduced, cannot have the least impression in causing me to relax for an instant the most rigid supervision of every patient to whom I, in any manner, administer or apply the drug."

Haupt: Boy, aged fourteen. By suggestion or direction of his mother—a morphine-cocainic—began the use of the drug hypodermically. He rapidly increased, so that at the end of three months he was taking more than 60 injections of a five per cent. solution daily, using over 45 grains of cocaine.

Before using he was a hearty, well-developed lad, but now showed marked signs of brain and body wreck. He was marasmic, skin bleached, dry, and yellow, extremities cool and covered with cold sweat, and his arms, the site of injecting, were studded with indurations. His sleep and appetite were irregular. His condition of mind was worse than body. His talk was low, nasal, incoherent, and almost unintelligible. When told to write he did so tremblingly and incoherently. He evinced no interest in anything except for cocaine and syringe. His entire life the last few weeks was like a dream. Toward the close he seldom left his bed, would not allow himself to be washed or dressed, and passed bowel and bladder contents under him. Delirium and hallucinations appeared, especially at night. These were combined with great irritability and anxiety which often increased to convulsions. His case compelled asylum care.

Brower: Physician, aged thirty-one; hay asthma; three years' duration; daily taking 60 grains by mouth and skin. Effects: Anorexia and impaired digestion; sluggish bowels; quick, feeble heart; rapid, shallow, irregular breathing; skin dry and pallid; copious urine, albumin, and oxaluria; sexual power lost; mental excitement alternating with depression; excessively emotional; reflexes exaggerated; memory impaired; excessive loquacity; hallucinations of sight and hearing; six months sanitarium treatment; recovery.

Brower: Physician, aged fifty-six; hay fever and overwork; one year's addiction by mouth and skin; amount unknown. Anorexia complete; alvine torpor; weak, quick, irregular pulse; slow, shallow breathing; feeble, staggering gait; profound nervous depression; impotence; urine scanty, specific gravity high, sugar and oxalate crystals; visual and aural hallucinations; violent mental excitement; sudden death.

Brower: Physician, aged sixty-three; cause, morbid curiosity, experiment; five years' duration; skin and mouth, 10 to 40 grs. daily. Effects largely like last case; same hallucinations; marked neurasthenia; mental excitement.

Crothers: Male, aged thirty-six; neurotic ancestry; had narrow escape from drowning, two months' brain fever followed; excessively nervous after; took cocaine, by advice, to relieve this; repeated, at first, nightly; full narcotic action after short exhilaration; five years' duration, by mouth and syringe; effects markedly neurasthenic. Tried to supplant it with alcohol, and became a rum drunkard; usually paroxysmal and insanely wild unless saturated with spirits. General paralysis supervened: one year later, death.

Taylor: Physician, aged twenty-five; cause, renal trouble; several years taking hypodermic injections; amount unknown; reckless using. "Would fill syringe and run needle through trousers." Result largely like that of morphinism; mental effects more marked than somatic: "Had absurd business attractions, tried to sell things not his own;" attracted much attention on account of his crazy acts. Visited professionally, he lamented his addiction, but would not agree to end it. Became violent and vowed to kill himself or others who might try to restrain him. Was put in an asylum, but escaped. Placed under private care, with a strong guard over him, he finally recovered.

Merriman: Physician. Began the drug for relief of headache; continued it several months, with result of profound neurasthenia and mental defect.

Burr: Male, aged thirty-five. Began cocaine for relief from hay fever; continued six months, reaching a hundred grains per week. Three weeks before admission to asylum, he became maniacal soon after taking a larger dose than usual, and was removed to hospital; elated and extravagant conduct; expansive delusions. Thought himself a superior being, and the only link between himself and the world was tobacco. Threatened violence. Pulse, 100; mental operations over-active; expression restless, elated, and suspicious; memory poor; general conversation boastful and extravagant. Noisy at night, assaulted patients. In a few days elation gave place to depression, and this soon followed by excitement. Condition improved by treatment. In six days slept without aid; in nine much more quiet. In fourteen, regained self-control to allow his having freedom of grounds without attendant. In six weeks much improved; in fourteen was dismissed, cured.

Clouston: Young professional man; took cocaine hypodermically as stimulant to do work; duration, eighteen months; initial dose, ½ gr., rapid increase; at end of six months was taking 45 grs.—probably more—a day. At times ten-grain injections. In three months rapid moral and mental damage: Dirty habits; neglectful, truthless, and sleepless, often up all night. Then actual insanity, visual hallucinations, and loss of memory. No power to work; did strange motiveless acts. Imagined people talking about him and accusing him of crime. Was impulsive and could scarcely restrain himself from assaulting imaginary tormentors, with whom he remonstrated on the street. All the while, half conscious of morbid brain action, and that he might have had delusions.

When first seen was excited; skin pale and muddy; pulse regular, 98; limbs and trunk scarred with hypodermic needle. Was placed under treatment and drug rapidly withdrawn. Reflex reaction lasted a week, "was most miserable." Then ate well, slept well, and walked much. Became cheerful and accepted restraint. "But it is certain he could no more, of his own accord, have carried out that treatment than he could have gone to the moon." He was plausible, full of promises, and cock-sure of not again using the drug. His bodily health improved. He gained twenty-eight pounds, but the power of the drug and the damage to his will were shown by his resuming cocaine the first chance that presented.

Zenner: Physician, aged thirty; cause, overwork and tried cocaine as tonic; began with five to eight drops four per cent. solution, hypodermic; continued once daily for two months, then tried to quit, but failed. Once feeling over-tired, took large dose; became exhilarated, drove six miles to near city, took a dose *en route*, and then became reckless. Neglected business, drank to excess, and had to be cared for by friends. He now took larger doses and more often, ten to twenty minims two to six times daily, keeping in constant excitement. In three months business gone, property lost, and himself nearly

ruined. Took, suicidally, sixty minims of ten per cent. solution. Later, asserted abstinence for one month. Then, while using cocaine in a surgical case, chancing to feel depressed, took a hypodermic injection, instantly unchaining the tiger. For two months took ten drops of a ten per cent. solution every three hours. Would remain in his office all night, repeating injections. Soon came depression, forebodings, and delusions of persecution. Feared everything; dared not venture out after dark, imagined himself to be arrested for some crime. Delusions became so active that he ran away. The demon still pursued him, driving him, frenzied, from place to place. Had hallucinations of sight and sound; saw ghosts, grinning devils, and heard millions of voices. Forcible restraint, and after three weeks' delirium in bed, was himself again. Had two later attacks, each ending in acute delirium and a mad house. His entire addiction was less than two years, with four short abstinence intervals. Mental trouble always greatest at time of largest using. During latter part of taking, took twenty drops of a saturated solution every two or three hours. Had frequent syncope and intermittent pulse, 140 to 150 per minute. Heart action rapid throughout, and was 90 to 110 for three months after cocaine quitting. Insomnia extreme, sometimes entire week without sleep. Was anorexic, often vomited, and became much emaciated. After the second attack, realizing his danger, he requested longer asylum detention, became an attendant, and there remained.

Morgan: Physician, aged thirty-four, having a nasal trouble, began using a four per cent. solution by atomizer to relieve pain. At first applied two or three times daily, but soon it was required every few hours. This failing, the strength of solution was increased to twenty per cent. Lastly, atomizing was replaced by snuffing, and the daily amount increased to one drachm, sometimes more. Perception and memory were notably increased during the early taking, but when the daily amount reached 60 grains, illusions, hallucinations, and delusions appeared. At first it was easy to mentally correct the illusions; the addition of hallucinations rendered correction more difficult; and latterly, the majority of the manifestations admitted of no explanation except their reality, and consequently were believed. The victim was conscious of the absurdness of the mental states, and discussed them with his friends, but could not be convinced of their true character. The illusions and hallucinations were those of persecution, and made the daily life of the patient one of horrors. The imaginary persecutors worked mostly at night, and so the patient reasoned that the insomnia caused by the cocaine would the sooner enable him to capture his tormentors and so end his troubles.

The cocaine demand was most urgent in the evening, beginning usually about four o'clock and lasting till two or three in the morning. The going of the delusional persecutors was coincident with the urgent demand for sleep, and this would continue till eight or ten o'clock every morning. Often, however, twenty-four hours were passed without sleep. Nervousness was pronounced; slight inco-ordination; pulse steady and quick, 120 per minute for hours; respiration disturbed; cold feet and creaking knee-joints; heavy, dragging lumbar pain, most intense when largest taking. Toward morning, exhaustion and sleep, with profuse sweating of peculiar odor; urine increased and dark; headache and toothache frequent. The patient's disposition was greatly changed; usually reticent, he made a confidant of everyone. Moral sensibilities and social responsibilities were obtunded and unappreciated; became indifferent to most important affairs; suspected intimate friends as his persecutors.

Three friends—physicians—told him his troubles were imaginary, due, they thought, to cocaine, and advised his placing himself under special care for treatment, but their opinion was denied and advice rejected.

The patient, however, realized something was wrong. Appetite was gone, sleep disturbed, was losing weight, and his mental state was disturbed; but all was attributed to unknown enemies from unknown cause, hounding him to death. This in some might have led to assault, but the question had been well discussed and the patient induced to give up weapons.

Travel was decided upon to escape his tormentors, but to no purpose. He drove from one part of town to another; changed his hotel three times in one night, but in each case found his Nemesis in an adjoining apartment. Police aid was asked, but only added to the trouble. He was at last impressed with the belief that he was going mad, and, acting on advice of friends, he placed himself under special sanitarium care. The cocaine was withdrawn, but not without reflex results, among others a renewal of the special demand for the drug on the third, sixth, ninth, and twelfth days, persisting twenty-four hours. Then two intervals of a week and two of a month. The last bout lasted one week, and tortured the patient beyond all previous experience. He remained under treatment several months, gained forty pounds, and recovered.

Harvie: Male, aged twenty-five. Began cocaine in spray by advice of physician for relief of sore throat. In three months health began to fail. Appetite impaired, stomach deranged, heart disturbed, liver disordered, bowels relaxed, skin dry and yellow, lips parched, face drawn. Became nervous, irritable, sleepless, and insanely jealous. Had hallucinations and delusions. "Scarcely two nights passed that he did not rouse the household to search for robbers." Was in almost constant unrest; could not be quiet five minutes to read, write, or talk. "His nervous system has been almost ruined."

Was placed under care of a charlatan, who in nine weeks dismissed him "entirely cured." First night after his return, resumed cocaine, and added morphine. Again placed under treatment without success. Latest tidings unhopeful, and the chances are that the case will end in a mad-house or a grave yard.

Brooklyn Avenue, Brooklyn.

AN INTERESTING CASE OF ARTERIO-RENAL DISEASE,

With Remarks on Early Diagnosis, Pathology, and Treatment.[1]

By R. VAN SANTVOORD, M.D.,

New York.

Having been appealed to by the Chairman to fill a vacancy in this evening's programme, I have chosen a topic interesting from the frequency with which it is exemplified in later life and its very great practical importance. To bring the matter sharply before you, I have chosen the following case as text and illustration.

The patient, when he came under my care, was a rather stout man, about five feet ten inches tall. No hereditary history bearing on his malady was obtained. He had previously suffered from typhoid fever, rheumatism, and pneumonia. He had a small, pigmented cicatrix on one leg, but no other suggestion from his history or from physical examination of syphilis. His general habits were good. Though not a total abstainer, he was not given either to constant indulgence or occasional excess in the use of alcohol. He used tobacco moderately. He was somewhat indolent physically, and indulged rather more than was good for him in pastry and sweets. It was not apparent that he had had more of the sorrows, anxieties, and disappointments of life than are borne by many men with impunity. His occupation is that of a salesman for a wholesale house, doing some travelling. He is in comfortable circumstances pecuniarily.

[1] Read before the Section on Practice of the Academy of Medicine, December 20, 1892.

Prior to December, 1885, he had consulted me only for occasional slight digestive derangements. During that month, being then fifty-one years of age, after some days of premonitory vertigo, he awoke one morning with nystagmus, tendency to fall to the left, ataxia of the left side, paræsthesia and numbness on the right, paralysis of the right fourth nerve, some difficulty in swallowing, slight blueness of the lips, and, later, slight cardiac irregularity —a grouping of symptoms which was interpreted as indicative of hemorrhage into the cerebellum. From this attack he recovered in the course of a few weeks to the extent that he could continue his business, but his gait remained a little unsteady, the right palpebral fissure slightly wider open than the left, and he for a long time experienced morbid sensations in the right extremities. The urine at this time was found to be normal in specific gravity, contained neither albumin nor sugar, and the microscopic examination of one small specimen was negative in result. A faint trace of albumin was discovered four days later, which disappeared on the following day. Sphygmographic tracing showed marked high tension with fairly elastic arteries. In March and May, 1886, his eyes were examined by the late Dr. D. C. Cocks, who found optic neuritis, and retinal hemorrhage on the right side.

The patient did not come under continuous observation again until August, 1889, a period of a little more than three years. He had been treated occasionally, in the meantime, for slight digestive troubles, mostly with Carlsbad water. From now on he complained of periods of mental depression, some sluggishness of the bowels, loss of strength and weight, the symptoms increasing rather rapidly after an attack of pharyngitis in March, 1890, which was probably due to grip.

During this time the patient has lost over fifty pounds, and now looks feeble and aged. Throughout the whole time, however, his appetite has been good, the indications of digestive disturbance, consisting mostly in a coated tongue and sluggish bowels, were such as would hardly attract much attention but for his general condition.

In June, 1891, the vision of his right eye was noticed to be defective. Dr. J. E. Weeks examined him and reported contracted retinal arteries, and areas of white exudation in the retina. Some of the smaller vessels of the left eye were also found to be affected.

The most interesting portion of this history is furnished by the examination of the urine. A faint trace of albumin was found on one occasion, in 1885, when the patient was suffering from his apoplexy, but none was found on the following day. From August, 1889, to the present date, the urine has been examined at intervals, the whole quantity for twenty-four hours being collected. No albumin appeared until April, 1892, when a trace was found. Heller's test was usually relied on. The last examination, November 27, 1892, showed albumin to the extent of about two per cent. of deposit. In every specimen examined a greater or less number of hyoline or hyaline, and light granular casts were found, with occasional specimens of molten casts, and more or less uric acid at times. The quantity was almost always somewhat above normal, the specific gravity varying from 1.014 to 1.018, *i.e.*, normal for the quantity passed. Sugar was never present. The quantity of urea, estimated by the Doremus apparatus, was usually below 28 grammes in the twenty-four hours, the lowest estimate being 23.18 grammes. On two occasions it rose above 30 grammes — 34.2 being the highest. On one of these the patient reported himself as feeling well, on the other he had been feeling relatively well for some months, although at the time of the examination his depression had returned. As the man all this time had been for the most part on ordinary mixed diet, appetite being good, was restricted only in the use of sweets, pastry, and rich dishes, and his weight had varied about one hundred and ninety to one hundred and fifty pounds, it will be seen that the excretion of urea was abnormally small.

During all this period the treatment has been as follows: Iodide of potassium was given during the apoplexy, but soon discontinued, owing to the derangement of digestion which it caused. Occasional courses of Carlsbad water, laxatives, tonics of various kinds have been given from time to time, the patient being subjectively most comfortable when taking nitro-muriatic acid, and tincture of taraxacum. Some months of apparent arrest of the malady seemed to be secured by that combination, though at present no good results seem to follow its use. Until within the last three months dietetic restrictions were limited to cutting off sweets, pastry, and rich dishes, *i.e.*, the things in which, on reviewing his habits, he seems to have been in the past unduly indulgent. Recently kumyss and lebben have been added to the diet, the nitrogenous foods have been given in more restricted quantity, and oxygen inhalations given with some apparent improvement.

A recent examination of the heart failed to reveal any appreciable cardiac hypertrophy, and no abnormal heart-sounds except marked accentuation of the aortic second sound such as usually goes with high arterial tension. The radial artery was rather small, resistant, and tortuous; the sphygmographic tracing denoted marked high arterial tension.

This example of a class of very common maladies presents several features of interest. Long ago Dr. Mahomet, in his article on the prealbuminuric stage of Bright's disease, called attention to the fact that high arterial tension was frequently a forerunner of demonstrable renal lesions. In this case, six and a half years elapsed between the detection of the high tension during the apoplectic attack and the appearance of albumin in the urine, if we except the slight transitory trace found immediately after a hemorrhage situated near the base of the brain. For about two and a half years before the appearance of the albumin, hyaline or hyaline and granular casts were always present, and most certainly would have been found earlier had they been looked for.

Of still greater interest is the fact that the excretion of urea was almost constantly considerably below normal.

If now we glance at the quantity and specific gravity of the urine, we find that the former was, as a rule, abnormally large; the latter what, under normal conditions would be expected from the quantity. The fair inference from this seems to be that the normal quantity of solids were being excreted and that the kidneys were therefore, although somewhat damaged, functionally able to do their work; *i.e.*, that the patient's condition was due not at all to his nephritis, but to some morbid process back of the kidneys; there was no poisoning of the patient by excreta retained in the body owing to renal insufficiency. Now, urea is one of the most soluble and easily eliminated constituents of the urine. The diminution in its excretion, therefore, as the kidneys were manifestly not materially damaged, must have been due to a diminution in its production in the body.

The reason for my presenting this particular case for your consideration, is that it shows a morbid process in which the general failure of nutrition is entirely out of proportion to, and obviously not caused by, the renal disease, and in which it is altogether probable that this failure cannot be accounted for by the vascular lesions. The mental depression and some degree of mental failure might indeed be due to imperfect blood-supply to the nerve-centres, owing to the diminished lumen and elasticity of the vessels. Muscular weakness without distinct paresis may be due to a similar cause. If manifest signs of cardiac embarrassment existed, many of the symptoms present might be attributed to failure of the central organ of the circulation.

But there is no evidence of cardiac embarrassment, and it does not seem probable that the manifestly bad gene-

ral nutrition is due to a correspondingly general and advanced arterial disease, particularly as the kidneys, the organs most likely to suffer, show no evidence of functional impairment. Back of the renal and vascular lesions, back of the general impairment of nutrition, there is obviously some fault of assimilation which lies at the basis of the whole morbid process. The patient eats enough; there is no very marked disturbance of digesting processes; yet his strength fails, his flesh melts away, and the vasculo-renal changes slowly advance.

To understand the pathology of the whole group of degenerative changes in the circulatory and renal systems, it is obvious that we must fathom the nature and causation of this underlying fault of assimilation. Although its existence and importance is recognized, yet usually, in treating of the subject, much stress is laid upon the histological changes of the vessels and kidneys, about which we have abundant information, while little is said about the vitally important underlying cause of these changes, owing to our ignorance of their essential nature. At present it is generally believed that the toxic matter at work in so-called cases of uræmia is not urea, but probably some other nitrogenous substance or substances. In the case above narrated the excretion of urea was abnormally small, and I stated my reasons for believing that this deficiency was due, not to retention of urea in the body, but to its not being produced in normal quantity. As the patient was taking a good supply of nitrogenous food, the inference seems fair that his nitrogenous waste was passing off in some form other than urea. As it is among the nitrogenous derivatives that the most toxic substances have been found, as above stated, it seems probable that the fault of assimilation is one affecting the proteids. It is a plausible supposition that it is owing to faulty nutrition from this mal-assimilation, that degenerative changes occur in the malady under discussion, and it is to the irritating and toxic qualities of certain nitrogenous derivatives produced in abnormally large amount, that inflammatory changes in the kidneys or blood-vessels, and the symptoms of so-called uræmic poisoning, are due, especially when, to their increased production, decreased elimination owing to renal insufficiency is added. In a paper read before the Academy over a year ago, on "The Pathology of Eclampsia and Albuminuria of Pregnancy," I stated the reasons for believing that the main elements of the disease was an auto-intoxication due to acute disturbances of assimilation similar to the above, in which sometimes the toxic substances were produced in such large quantities that the patient is overwhelmed by them even before sufficient renal irritation has been set up to damage the kidneys. What organ or organs are at fault in this process we do not know, though with some show of probability the liver has been considered the chief offender. Differing on the surface, as the above case does from one of puerperal eclampsia, both maladies have in common the deficient formation of urea, both may with plausibility be referred to the same error of assimilation called into existence by different etiological factors.

The particular renal lesion in this case seems, from the increase in the amount of urine passed, the late appearance of small amount of albumin, and the associated vascular disease in other parts of the body, to be an early stage of renal cirrhosis due primarily to vascular lesions. This is the form of disease most commonly allied with gout, and according to the views of many authorities the morbid process in the case would be called latent gout. While this is a plausible view of the matter, our knowledge is, it seems to me, still too imperfect to warrant us in being dogmatic about it. There is, however, a certain suggestive analogy between maladies of the class under discussion and saccharine diabetes. The latter is due to, or intimately associated with, faulty assimilation of the hydro-carbons; the former probably is due to, or is at least intimately associated with, faulty assimilation of the albuminoids. The stormy outbreaks of diabetic coma are paralleled by the so-called uræmic attacks, both due probably to the sudden generation or retention of unusual quantities of toxic substances. Diabetes frequently occurs in the gouty.

When we come to inquire what it was that gave rise, in the case under consideration, to this primary fault of assimilation, our answer cannot be positive. Latent gout has above been suggested. Although the intervention of an acute specific disease, viz., the grip, seemed to hasten the progress of the malady, there is no evidence of any specific origin of the troubles. I think I am expressing the general opinion of the profession in stating my belief that the general depressing agencies, worry, grief, over-work, lack of sufficient exercise, too much or improperly selected food, are at the bottom of many such cases, though some are doubtless due to syphilis, lead-poisoning, or other specific causes. In this particular case, it is to these non-specific agencies that I am inclined to attribute the patient's disease. Although, as above stated, they were not apparently more operative than in many others in which such results do not follow, yet we must recall the fact that the vulnerability of the patient is as important a factor as the intensity of the cause. When, now, we turn to the question of therapeutics, it is obvious that our success will depend not a little on early diagnosis. Here it is that the sphygmograph proves itself of very great value, as it is by its aid that one of the earliest warnings of coming danger, the high-tension pulse, may be most certainly detected. Albuminuria is another very valuable indication, but often a late one. In this case it did not occur until six years after a dangerous attack of cerebral hemorrhage had first called attention to the morbid state of the patient's blood-vessels, if we except the slight transitory albuminuria immediately after the apoplectic attack. Far earlier than this we find the diminished excretion of urea. It is upon this, together with the high arterial tension, that we can most confidently base a diagnosis of incipient renal and vascular degeneration, in the present state of our knowledge.[1]

The most important part of the actual treatment of the disease is probably the proper regulation of the patient's habits in every respect. Each case must be studied by itself, and appropriate prescriptions as to work, sleep, exercise, and recreation must be given. In the less advanced cases some form of systematic exercise, preferably something which is also a recreation, should be ordered, or the patient be sent to a mechanico-therapeutic institute, where the exercise can be more exactly regulated. With regard to diet, the things to be aimed at are the guarding against excess, and the limitation of nitrogenous food to as small an amount as is compatible with the maintaining of the patient's nutrition. Here the fermented milk foods, kumyss, matzoon, and lebben, are probably of value. The one drug which high authority lays stress upon as specific in its action is the iodide of potassium, but its efficacy is denied by apparently equally reliable observers. I am personally inclined to believe that drugs are of only secondary importance and to be employed only to meet particular indications in individual cases, not with any hope of directly controlling the progress of the disease, except of course when some specific cause, such as syphilis, exists.

I have thus attempted to bring before you, as briefly as possible, some practical considerations regarding a class of maladies which contribute very largely to mortality in the latter half of life, both directly by fatally implicating the cerebral blood-vessels, the cardiac arteries, or kidneys, and indirectly by reducing the power of resistance to acute infectious diseases.

I am not aware that I have said anything novel about

[1] It must be remembered that the excretion of urea varies physiologically, and before being able to use this indication with certainty, in incipient cases more exact methods will probably have to be elaborated, such as putting the patient on a diet of known quantity and composition, prior to the test.

the subject, but it is one of such great importance that this imperfect review, and the discussion which I hope to elicit, may not be unprofitable.

106 West 122d Street.

NASAL DOUCHES AND SPRAYS.[1]

By JONATHAN WRIGHT, M.D.,

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The subject of "Nasal Douches and Sprays" possesses only a mild interest for the experienced rhinologist, because he has long ago settled in his mind the relative value of these measures, and has dismissed them from the realm of things to be considered. This, however, does not mean that rhinologists are united in sentiment in regard to them, but it is because their individual experience with them has been so large that arguments have little influence.

Before a society of general practitioners, however, it may not be amiss to say a few words in regard to them.

Anyone with or without rhinological technical skill can spray or syringe into the anterior nares, and I presume, from the number of compressed air apparatus I see in the offices of general practitioners, that almost every one does it. Everyone, however, would not do it if the measure were not productive of some benefit in a very large majority of cases of nasal disease. To make it the alpha and omega of nasal treatment, however, is egregious folly.

The nasal douche has been denounced by otologists with a vigor explainable only by their experience with middle-ear troubles due to its employment. Laryngologists, on the other hand, although they have not abandoned it, have been able to present only a very faltering and divided front to this vigorous criticism. I feel, therefore, as though I were venturing upon a perilous task in taking up cudgels in its behalf.

The difference of sentiment, in regard to this measure, between the otologist and rhinologist arises principally from the point of view. The former is in a position to see the evil results occasionally following its use, while he is not himself so often confronted with the problem of how to cure nasal catarrh. The rhinologist, on the other hand, while perhaps not appreciating the extent and gravity of the danger to the middle ear, cannot ignore it, but knows the necessity of the nasal douche in the treatment of certain nasal affections.

I am unacquainted with any surgical procedure, however trivial it may be in itself, or however satisfactory the results obtained from its practice are, which has not its drawbacks and its possible dangers. I am unacquainted with any drug, however satisfactory its therapeutic reputation, or however strongly it may be indicated in any case, which is unaccompanied by any evil after-effects or dangers.

It is scarcely necessary to remind you that opium and ether have their drawbacks, that tonsillotomy and tracheotomy have their dangers. I trust I will be forgiven for calling your attention to these facts and fundamental principles in therapeutics, but it has seemed to me that in many discussions the fact is ignored that in employing any efficacious remedy in any disease we are simply choosing between two evils.

The most striking and functionally important element of the mucous membrane of the nasal cavities is the glandular. The muciparous glands add a viscidity to the watery secretion of the nose which is of the utmost importance in keeping the mucous membrane moist, by preventing too rapid evaporation and draining away. The glandular structures are the first to suffer permanent damage from the inroads of pathological changes due to chronic inflammation. Nature has supplied the normal mucous membrane with an immense stock of muciparous glands, many more than enough, under ordinary circumstances, to do the work required of them. After the examination of a great many microscopic sections it has seemed to me evident that, when the mucous membrane is so hypertrophied in places as to suggest the desirability of its removal by surgical means, we may be sure to find the number of glands has greatly diminished, both absolutely from the normal, and relatively to the other, elements. There may be thickening of the epithelial layers and of the fibrous connective tissue. The blood-vessels, if not actually increased in number, have become greatly dilated and more tortuous in their course. The bony structure itself may be thickened. With all these evidences of over-nutrition, the glands show almost from the first beginning degeneration. I regard this as a strong argument in favor of the opinion that atrophic rhinitis is simply a later stage, pathologically, of hypertrophic rhinitis. The lumen of the gland becomes dilated. The cylindrical glandular epithelium becomes swollen, cloudy, and granular; it is in many of them seen to be detached from the connective tissue of its walls. In some we see nothing but a fibrous ring in the centre of which is a mass of granular matter, with perhaps here and there part of a cell whose outlines have not entirely disappeared. Where the section is made vertically to the surface of the mucous membrane and longitudinally through the duct of the gland, we invariably find the duct itself choked with detritus, the true secretion of the gland mixed with the granular material from the dead cells. This plug may often be seen projecting at the surface from the mouth of the duct, looking not unlike the mouth of a test-tube stopped with cotton. When serum continues to be thrown out within this plugged gland, we have an ectasia which often results in tiny cysts, and not infrequently these grow to macroscopic proportions, as seen occasionally in mucous polypi.

In the early stages of acute inflammation in coryza, the serum is thrown out so abundantly, the vascular pressure is so great, that it requires very little stretch of the imagination, strengthened by clinical observation, to believe that these ducts, the glandular conduits, are kept well flushed out in spite of the presumably swollen condition of the lining epithelium narrowing their lumina. When the later stages come on, when the vascular tension is diminished, there is a lessening of the watery secretion which had previously diluted the viscid mucus. This condition also obtains where the inflammation has become subacute or chronic, and in it we find one explanation of why the glands suffer most and succumb the earliest. Not only are they destroyed by the clogging of their ducts with secretion, but by the encroachment and pressure exerted upon them by the slow increase of the fibrous tissue, of the round cells, and of the blood-vessels. It naturally, therefore, becomes of the utmost importance that the ducts of these glands should be kept as free as possible. In this connection, also, we receive a hint of caution as to the unrestrained use of the galvano-cautery.

It is a universal law in surgical therapeutics, that where a sinus cannot be destroyed with the knife it must be kept open to allow exit to deep discharges. This is done by drains or by constant syringing and douching.

Now, we have the same condition of affairs on a microscopical scale in the glands of the mucous membrane of the nose. It is manifestly impossible to do more in this direction than to disembarrass the mouths of these little sinuses of the plugs which, exposed to the air, must tend to become dry and thus hermetically seal the outlets. We have never invented anything better than water to wash away dirt, and when there is grease with it, an alkali is necessary to saponify it.

This, then, forms a rational indication for the nasal douche or spray of an alkaline watery fluid, and in practice it has been my experience, that the results obtained from its use confirm the soundness of the data on which the indication is based. In the absence of the contra-indications of which I will speak later, I use it always for a certain length of time in chronic rhinitis, whether hyper-

[1] Read before the Kings County Medical Association, December 13, 1892.

trophic, atrophic, or vasomotor, before I employ cautery, saw, snare, or trephine. I am sure that if this rule was more generally adopted, very many less noses would be burned, cut, and snared.

Disembarrass the mouths of the glands from their secretions by cleanliness, and it is sometimes marvellous to see how huge, swollen, turbinated bodies will shrink down into shape and leave the nasal passages free for the performance of their functions.

Please do not understand by this that I at all discard surgical procedure upon the turbinated bodies. In a very great many cases cleanliness will have to be followed by surgery. I do wish, however, to state most emphatically that one-half of the burning and cutting operations now done in the nose are unnecessary, although the number has greatly diminished in the last two or three years.

There has lately been considerable discussion among rhinologists as to after-treatment in intra nasal operations. Some insist that the best results are obtained by the use of intra-nasal tampons,[1] others by the use of various powders, as pyoktanin,[2] or by protective coatings, as collodion,[3] or by making a superficial eschar with tri-chloracetic acid;[4] and still others do nothing at all as after-treatment. Each, however, claims that no bad results ensue on his particular method, and if all are strictly accurate, we never get any baneful after-results with any method.

The unprejudiced clinical observer cannot but think that the conclusion reached in this somewhat ironical fashion is, after all, not very far wrong. Theoretically, however, I believe it bad practice to leave any irritating foreign substance in the nose after operations, and practically, I have never seen any indications for this plan, except when, as frequently happens, it is wise to use an antiseptic tampon to control hemorrhage when it is excessive, or to prevent recurrence, when the patient is not to be under observation.

It has been shown by Besser,[5] Deletti,[6] myself,[7] and others, that even the normal nose, in the majority of cases, is the site of more or less numerous agents of suppuration—the staphylococcus pyogenes. If you will make cross and vertical sections of the nasal cavities in the cadaver, you will at once see the entire impossibility of disinfecting the anfractuosities, the depressions, and projections of the mucous membrane of the cavities themselves, and still more of the accessory cavities, the maxillary, the ethmoid, sphenoid, and frontal sinuses, all of which communicate with the nose proper, and in all of which bacteria may be found. The naso pharynx also is an especially favorite breeding-place of infective bacteria. I have found there the streptococcus erysipelatosus in an apparently normal case, and produced phlegmonous erysipelas with the cultures in rabbits.

Since the nasal secretions cannot be made aseptic, the less they are increased by irritation after operation, and the oftener the wound is cleansed, provided granulation is not interfered with, the better it would theoretically seem to be. A plug, or a powder, or an eschar, acts as a foreign body and increases secretion.

As for a tampon, it absorbs the secretions in its meshes. If it is saturated with an efficient antiseptic, provided the chemical action of the secretions does not neutralize its antiseptic power, a certain number of bacteria will be destroyed in its meshes, but around it forms a glairy coating of mucus which prevents the further absorption of either leucocytes or bacteria, while the secretions are blocked up above and around it, and an ideal breeding-ground is furnished for the nourishment and multiplication of germs. If anyone is disposed to doubt this statement, let him plunge a so-called antiseptic tampon, after it has been in the nose twenty-four hours, into a tube of nutrient gelatine, and see if there is not an overwhelming crop of various bacteria the next day. Were it not to be presumed that the intra-nasal tissues possess or acquire considerable power of resistance to the entrance of infective agents, or of neutralizing their baneful properties, it would be hard to understand why cases of septicæmia are not of frequent instead of rare occurrence after intra-nasal operations. Another clinical phenomenon has attracted my attention in this connection, and that is the comparative harmlessness of surgical procedures when the site of operation is below a region of suppuration, as in antrum or ethmoidal trouble. Pus continually flows down over the wounded septum or turbinated bone, yet with very imperfect cleansing it is rare that any local or constitutional evidence of septic trouble supervene. Indeed, I have almost persuaded myself that there is less apt to be a rise of temperature in these cases than where there is no previously existing suppuration.

To return to the subject of the paper, this is the reason why I believe that intra-nasal irrigation after operation is the more rational procedure. I cannot bring forward any more convincing argument than this theoretical one, and practically I can join in the all but universal chorus: "I have rarely, if ever, seen any septic trouble follow an intra-nasal operation, when this plan is carried out."

The contra-indications to the use of watery douches and sprays are based on the danger of middle-ear trouble, and on the disadvantages of washing away the viscid secretion which normally coats the mucous membrane and protects it from dryness by evaporation and from dust, and which no artificial fluid can entirely replace. Watery douches and sprays should not, therefore, be used in the first stage of coryza, not only because they are of harm rather than benefit to the inflamed mucous membrane of the nose itself, but because the infective material in the nose and naso-pharynx is especially virulent, and liable to set up middle-ear trouble when carried into the Eustachian tubes, which are themselves congested and ready to furnish a suitable soil for the growth of micro-organisms. The nasal stenosis, due to the swelling of the inflamed mucous membrane, still further facilitates the passage of fluid from douche or spray into the Eustachian tubes in coryza, as exit by the opposite nostril is blocked. Neither spray nor douche should ever be given into the hands of persons whose intelligence is insufficient for understanding directions given for its use. I am inclined to think that it is inadvisable to use watery solutions in young children, either by the physician in the office or by the parents at home. They are unable to tell when fluid enters the Eustachian tube, and they are especially prone, on this or some other account, to have ear trouble from the use of watery nasal douches and sprays. Moreover, their nasal mucous membranes, like their skins, are more easily irritated and need more careful protection than do those of the adult. They suffer rarely from chronic rhinitis, except the suppurative and atrophic forms, where the watery solutions are imperatively demanded. The overgrowth of lymphoid tissue in the naso-pharynx requires, of course, an entirely different method of treatment.

The precautions in using either spray or douche are:

1. To be sure that the road of exit is wider than the road of entrance. Let the stream from the douche enter in the most obstructed nostril and flow out of the freer nostril. Use the spray only with very gentle pressure in the open nostril.

2. Never allow the patient to use any kind of syringe or douche at home, which exerts pressure upon the stream of water. With the head thrown back, allow the water simply to run down hill over the convexities of the turbinated bones and along the nasal floor.

3. Always explain to the patient the possible danger to the middle ear, and caution him that in using douche or spray at home to desist if it causes any pain, discom-

[1] Roe: Medical News, March 28, 1891.
[2] Bresgen: Anilinfarbstoffen bei Nasen Hals und Ohrenleiden, 1891. [3] Freudenthal.
[4] Gleitman: Annals of Ophthalmology and Otology, January, 1892.
[5] Besser ref.: Centralbl. f. Bakt., Bd. v., No. 21, 1889.
[6] Deletti: Archivii Italiani di Laryngologia, anno xi., 1891, p. 153.
[7] Wright: New York Medical Journal, July 27, 1889

fort, or fulness in the ears that does not pass away in a few minutes.

4. Do not allow the patient to forcibly blow his nose after douche or spray, while he compresses the alæ. Allow as much of the fluid to drain away of itself as possible, and then have the patient blow his nose gently without compressing the nostrils.

In the office I have come greatly to prefer, for watery solutions, the post-nasal syringe to any form of spray apparatus, although I use both in many cases. The naso-pharynx is the place which needs the most cleansing because it is the place into which, not only its own mucous structures drain, but also those of the nasal cavities and their accessories. The anterior spray simply cleanses the front inch or inch and a half of the nasal passages, and drives all the dirt and fluid back to the pharynx, and allows it to drip away as best it can. The spray, if strong enough to reach the naso-pharynx by its own force through a narrow, tortuous passage, is so strong that it irritates the anterior portions while it increases the danger to the middle ear, not only by the possible entrance of the fluid into the Eustachian tube directly, but by increasing the air-pressure in the naso-pharynx, and forcing its secretions into the tube. On spraying anteriorly, the soft palate shuts off the naso-pharynx from the oral pharynx, and leaves the opposite nostril as the only safety-valve to the increase of aërial intra-nasal pressure.

Now, with the proper and careful use of the post-nasal syringe, the cleansing fluid is applied to the dirtiest point. The direction of the current carries the dirt out of the body, not into it. The soft palate necessarily has to be pulled away from the pharyngeal wall by the hooked point of the syringe, so that no increase of water- or air-pressure toward the Eustachian tubes can occur. An amount of fluid is thrown upon the mucous membrane sufficient to do some practical good.

The post nasal spray as a cleanser of the naso-pharynx is practicable only in very rare cases. Watery sprays, however fine, will nearly always cause contractions of the fauces when directed to the naso-pharynx. There is, however, no more satisfactory way of applying oily sprays either to the post-nasal space itself, or to the nasal chambers, than through the naso-pharynx by means of the "up spray," oil being very much less irritating to the mucous membrane of the pharynx.

The post-nasal syringe, in unskilled hands, is the most awkward and undesirable instrument which can possibly be used for the treatment of nasal affections. I have so often seen it thus used that I cannot forbear giving you an account of it.

The method of procedure is about as follows: The syringe is filled with cold solution; the patient is not told what is going to be done, but he is told to open his mouth. He does so, closes his eyes, holds his breath, and apparently inwardly prays. His faucial muscles are contracted and his palate clings to the post-pharyngeal wall. The operator pushes down the tongue with his depressor, screws the rough point of the syringe up between the soft palate and the post-pharyngeal wall, scraping off the epithelium as he goes. The piston is driven home with force, the cold spray strikes the victim's warm nasal and post-nasal structures. He starts from his chair, the fluid gushes from his nose over his own and the operator's person. He pulls the syringe out of his pharynx with a jerk, strangles, and when he recovers has murder in his heart. The patient, after one experience with it in such hands, regards it with terror and horror. In experienced hands it is quite as comfortable to patient and operator as the anterior spray, and very much more efficacious. Occasionally, with an intelligent, careful, and persistent patient, it may be safe to intrust a post nasal syringe in his hands for use at home. After a little practice he will often be able to use it successfully, and in that case it is preferable to any kind of an instrument. Watery sprays, in the patients' hands, in the large majority of cases, do little more than amuse them. They are hardly ever able to cleanse the nose with them with any thoroughness. Some form of nasal douche is much more efficacious, although it may not be so safe.

The introduction of oily sprays and nebulizers in nasal therapeutics was a great addition, but in my experience the indications for their use are entirely different from those for the aqueous solutions, and do not conflict with them.

The oily preparations are so light that they will float in the air into all crevices and crannies of the mucous membrane. Oily sprays are to be used in the acute inflammations of the nose and throat, impregnated with various volatile substances according to the credulity of the nasal therapeutist or the idiosyncrasy of the patient. They are to be used always after cleansing with watery solutions. They are to be used where watery sprays are contra-indicated.

They do three things: 1. They coat the mucous membrane as a protective against too rapid evaporation and against dust. 2. They probably tend to lubricate the outlets of the glandular ducts, and so facilitate the subsequent washing away of the secretion. 3. They are good vehicles for carrying volatile substances into the nose.

We often hear of the use of antiseptics combined with these light oils. An antiseptic is meant to kill germs. A germ is a micro-organism which lives only in moisture and contains moisture. Under the microscope a micro-organism in oil may be seen surrounded by a protective zone of water, like a halo of glory, and will probably live until exhausted from lack of food. The nose is the only situation in which I have of late heard of physicians, with a fair amount of intelligence, using oil as a vehicle for antiseptics, forgetting that oil and water will not mix.

I cannot refrain, before closing, from expressing wonder at the large number of new drugs which are being constantly and empirically used within the nose. There is a certain order of mind or of temperament in the human race which seems to need no recommendation for belief in various assertions except their inability to understand them. This fault has frequently been laid at the door of the fairer sex, but surely it does not all belong there, nor even all of it outside of medical circles.

Except in cocaine and the antiseptics, I confess I have little faith in the drug part of nasal therapeutics. The conclusions drawn from clinical experience are so largely dependent upon the credulity or the scepticism of the observer, in regard to the action of ninety-nine drugs out of a hundred that claim any specific action, that I believe it is time lost to try them empirically. Fortunately we now know enough of animal physiology and of pathogenesis to disregard any recommendation not founded upon that knowledge.

To conclude, I do not wish to be understood to stand among those who disregard or attempt to belittle the danger of the douche to the middle ear, but in my experience there are certain chronic forms of rhinitis, characterized in general by a clogging of the glandular conduits, in which any other treatment, or rather any treatment that does not include cleanliness, stands so far below the nasal douche in its beneficial results, that I believe we are justified in running the slight risk of injury to the middle ear, if we employ care in selecting cases and caution in the use of the remedy.

I have purposely avoided going into details as much as possible in dealing with the general considerations of this subject, because opinions in regard to drugs and the various forms of spray and douche apparatus must be as numerous as there are hearers within the sound of my voice.

A Constantinopolitan Doctor was recently deprived of the right to practise because his patient, the daughter of an official, died.

Negroes and Malaria.—Dr. Piercy, of Antigua, says that negroes suffer from malaria quite as badly as whites.

SAFETY IN THE USE OF CHLOROFORM.

By A. T. HUDSON, M.D.,

STOCKTON, CAL.

EVERY item of experience which promises safety and efficiency in the use of anæsthetics it is our duty to employ.

The experience of the writer began, in anæsthetics, when a student at Albany Medical College, in 1846 or '47. Dr. Morton came to Albany to exhibit his discovery of etherization before the professors of the college. Students who had teeth to be extracted were asked to take the operating-chair. I was myself a volunteer. When the inhaler was applied, excluding the air so completely, the sense of suffocation was extreme and almost unbearable. But he persisted in holding it to my face, when, after a few moments of struggling, I felt a lively exhilaration, followed by a delightful sense of calm. Then I heard him say, "He is ready." At this I thought that when he pulled the tooth I would yell, whether it hurt or not, and let him know I was awake. The next moment the tooth was out and I did not speak, for the reason that the restful state made me so happy that I did not want to break the spell. A shake and a dash of a wet towel on my face compelled me to speak, or remonstrate at being broken of my elysium. By this experience I can understand the distressing sense of suffocation generally felt when the patient will clutch frantically at the inhaler and beg for a breath of air. This sense of choking is inevitable when pure ether or pure chloroform is given for rapid anæsthesia. It constitutes a serious objection to the method. Nervous dread of an operation is sometimes so great that a large quantity of an anæsthetic is used or wasted, and more time consumed before the operation can be finished. This was the condition of a patient of mine who was to have a leg amputated. Four ounces of ether and one ounce of chloroform were used without inducing sleep. His dread of the operation kept alive his anxiety, and he would rouse himself and say, "Don't cut yet, I am not asleep." Having to procure more chloroform I gave him two ounces of brandy during the interval of waiting. After the dose of liquor it took but a few drachms of the anæsthetic to produce a profound sleep, and the amputation was done. This case taught me the value and the necessity of antecedent stimulants in all cases. This was in 1856.

Recently a neighboring physician had a case of phimosis. He proposed to begin with whiskey. Objection was made to whiskey on the ground of teetotalism. So chloroform was given on a napkin within a paper-cone inhaler. The patient did not go under it easily. When he was almost under it he would strive to talk in an hysterical manner. In this way much time was wasted, and it was three hours before the operation was done. By this time the patient was found to be blue in the face and limp, and not breathing; he was apparently dead. Cold water was applied, and artificial respiration was used, with hypodermic use of ammonia, with no relief. Then the Nélatonic tramp process, with the patient in the heel-and-shoulder position was tried. Walking diligently for half an hour, the patient began to breathe. When he had revived sufficiently to talk, he began to yell in a crazy, incoherent manner. He continued to yell and thrash around the bed for six hours before he came to himself. The amount of chloroform used was nearly five ounces. Probably this almost fatal condition was the result of an excess of chloroform, and the lack of the antecedent stimulant of brandy.

From a brief analysis of 37 cases of death by chloroform, reported in the "Medical and Surgical History of the Rebellion," we find that 11 deaths occurred within one to five minutes after the first breath of chloroform was taken; 13 died during the operation; 13 died immediately after the operation. The autopsy of those examined revealed no pathological reason for death, except one had fatty heart. Nearly all these deaths followed after taking but a minimum quantity of the anæsthetic.

Therefore we see that quantity of chloroform, as a factor of death, must be ruled out. In the case above cited $4\frac{3}{4}$ ounces were hardly enough to cause death. In 33 of 37 deaths only a minimum quantity of the anæsthetic was given. All poisons kill by the maximum quantity. Alcohol is fatal only in an overdose.

Hence it is illogical and unscientific to attribute destructive forces to the minimum which the maximum does not possess. On this basis we have a right to believe most of the above deaths were due to some subtile psychic condition or nervous shock, other than to the anæsthetics.

Sudden death from nervous shock occurred occasionally before the period of anæsthesia. A typical case of this kind occurred to a prominent surgeon in San Francisco in the early days of anæsthetics. He was about to do a minor operation upon a sensitive woman. She wanted to take chloroform or something of the kind. But he felt timid and objected, and urged her to bear it, as it would be of but short duration. She finally consented to try. So she clinched her teeth and braced herself firmly for the ordeal. During the work he talked to her encouragingly and complimented her on her fortitude in not uttering a groan nor moving a muscle. When it was done, the surgeon looked up and saw his patient pale, rigid, dead!

The probable cause of this woman's death was great fear and dread of the knife, which produced the fatal shock through the nervous system.

The similarity of the forms of death, as seen in the above typical cases, each of mental shock, and the sudden deaths after taking a small amount of anæsthetic, is too palpable not to be considered as arising from like causes. In the absence of demonstration to the contrary, we may conclude that fear and nervous shock were the prominent, if not the chief, factors of death after a minimum quantity of chloroform had been used.

What are the best means known to avert the above-named dangers? We answer, the early and ample use of brandy is the remedy. It is the only thing that will steady the nerves and induce a sense of indifference to whatever may happen.

Stimulants should be given a few minutes before chloroform to the border of intoxication, or of high exhilaration. When a person is under the effects of intoxicants all anxiety and mental perturbation are neutralized.

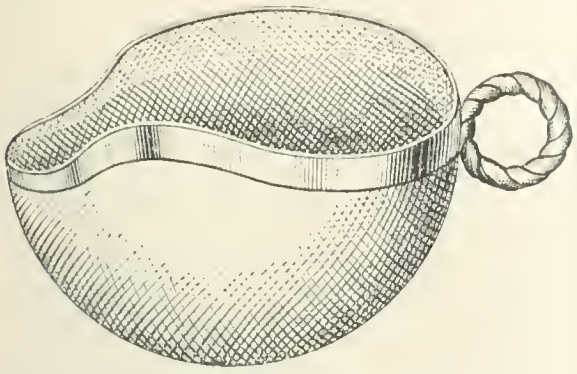
It is to be noted in the thirty-seven cases of deaths in the army reports stimulants were given only twice. As the quantity employed is not stated, there is no knowing whether the patient had a sufficient dose to answer the purpose of a brain sedative or not. This is a very important point, to be emphasized and practised as a measure of safety. Brandy should always be given before chloroform, except to children, regardless of quantity. One, two, or three ounces may be given to obtain a sedative effect—to put the patient into a happy mood. There will be no danger.

Chloroform is the anæsthetic *par excellence*. It is preferred by the largest number of surgeons the world over. In a recent report by a chloroform committee of the German Surgical Congress, 109,230 narcoses were made with chloroform, against 8,431 made with ether. The percentage of fatalities were against chloroform and in favor of ether. Notwithstanding this apparent objection the superiority of chloroform in efficiency, in economy of time, the lessening of nausea and of the sense of suffocation, will always give it preference with surgeons generally.

In a valuable article on anæsthesia, by Dr. W. M. L. Coplin, in the June number of the *Therapeutic Gazette*, he justly condemns the cone inhaler as awkward and barbarous. He prefers the Allis inhaler. There are several objections to the Allis inhaler. It takes too much material to charge it, and it is difficult to clean if the patient spits blood or mucus into it.

I recently assisted at an amputation of the head of a femur. Ether was used with the Allis inhaler. The operation lasted for one hour and a quarter. One-half pound of Squibb's ether and one ounce of chloroform were consumed.

The latest evolution in the line of inhalers is one that I have used for six years. It is a simple wire sieve with the front part cut out or scalloped out so as to fit the



nose and the face. It is lined with one or two thicknesses of surgeon's lint, or of flannel. It can be made by any dexterous surgeon. It is essentially and by odds superior to all others I have any knowledge of.

It economizes the inhalent.

It is easily cleaned.

It is convenient to handle and keeps the liquid chloroform or ether from the skin of the nose and lips.

It is inexpensive.

With this inhaler, handled as a plaything, I have put children from two to four years of age into a quiet sleep while they were playing and laughing. When children have no fear of a doctor and pass to sleep in a laughing mood they will not dread future operations.

I have often kept a patient in profound sleep for forty to sixty minutes on one-half to one ounce of "chloroform mixture," which consists of nine parts of chloroform with seven parts of alcohol. As the concentrated vapor is sometimes dangerous, I have adopted the plan of diluting the chloroform by nine to seven, or ten to six of alcohol. This is very efficient, and rarely causes vomiting.

APPENDICITIS APHORISMS.

By ROBERT T. MORRIS, A.M., M.D.,

NEW YORK.

Statistics show that an appendicitis patient may be expected to recover several times, and to die once.

The appendix vermiformis should be removed as soon as a diagnosis of appendicitis is made, because no one can tell at just what moment necrosis is going to follow the disturbance of circulation.

It matters not whether the swelling which cuts off the circulation of the appendix is caused by the usual catarrhal process, or by fecal concretions, or by foreign bodies. The mucous tube cannot swell readily within its inelastic sheath, so it chokes itself to death at any hour in the course of any attack.

The operation should be done at any stage of the disease in which the surgeon finds the patient, because the surgeon's methods are certain and safe, and nature's methods are uncertain and risky—speaking by comparison.

In patients who have had recurring appendicitis the appendix should be removed, even if there have been no recent attacks, because trouble may come when the patient is on the ocean or in the woods, away from skilled surgical help. Those who object to the proposition have never seen the horrible, black, stinking, ragged little crater that suddenly begins to erupt among an unsuspecting patient's vitals.

An appendix that has once been inflamed is a disabled appendix when adhesions bend it or compress it, because it cannot again swell evenly.

If the physician thinks that his patient is in luck because an appendicitis abscess has opened into the intestine and discharged its contents, he is badly mistaken. The rotting *débris* that remains is likely to set up a dangerous septicæmia, unless the surgeon opens up the tract from another direction and puts the poison all into a pail.

Resolution after the expectant plan of treatment means that peritoneal protecting exudates have become absorbed, or post-peritoneal cellulitis has subsided, leaving the treacherous bit of gut free to strike when nature's guard is down, if it wishes.

The plan of simply opening an appendicitis abscess and failing to hunt for multiple abscesses, or to remove the appendix remains, is a bungling, incomplete, unsurgical plan. (I hope that certain ones of my earlier patients will not read this. Two of them will not, that I know.)

The surgeon who operates with the patient in any position excepting Trendelenburg's, fails to give his patient the advantages that he is morally bound to give him. With the patient in Trendelenburg's position we can work by sight, removing pus and *débris*, and separating adhesions with the least possible necessity for handling intestines. Very often nothing is seen of viscera, excepting the appendix and a few inches of colon, during the entire operation.

The incision should be over the normal site of the base of the appendix, in a line parallel with the middle line of the abdomen, because that incision gives the best opportunity for exposing the appendix and closing the abdominal wall securely against hernia.

The operation for appendicitis is not to be attempted by men who have not had previous experience in abdominal surgery in man or the lower animals. Otherwise statistics will be against the right.

The appendix should be removed close down to or fairly into the cæcum, because the tissues of the appendix retain their bad character among good surroundings, and secondary perforation is likely to take place close to sutures or ligatures which are situated in appendix tissue proper.

The little collar of mucous membrane which pouts into the cæcal opening when the appendix is removed, should be ligated with the finest of strands, and then trimmed close to the ligature to prevent infection from the cæcum.

A separate layer of small sutures should be used for bringing together the muscular walls of the cæcal wound, because nice apposition is necessary if we wish to leave no weak spot in the intestine.

In the intra peritoneal cases the margins of cæcal peritoneum which fall together when the muscular walls are sutured, must be scarified until pink serum exudes, then the scarified peritoneal surfaces are sutured over the wound for extra protection. The necessity for scarifying peritoneum is realized only by surgeons accustomed to experimental abdominal work.

We must depend upon deliquescent salts in the colon for drainage, as a rule, because drainage apparatus would leave a weak spot in the abdominal wall, and because drainage apparatus fails in its purpose as soon as adhesion can wall it off.

In closing the abdominal wound peritoneal margins should be closed with a separate line of sutures, because properitoneal hernia might otherwise develop, and because a gaping of peritoneum would leave out one little element of strength in the wall.

The cut fascia or tissue of the oblique and transverse muscles must be closed with a special tier of sutures, because their fibres drawing in different lines would otherwise make an uneven scar and leave a weak spot.

The superficial fascia is so very important at the site of the operation for appendicitis that it must be honored with a separate tier of sutures, because if we tried to

suture skin and superficial fascia with the same tier of sutures neither tissue would be neatly cared for.

The death-rate after the operation should not be above one per cent., and that percentage caused by complicating diseases, in cases in which a skilled surgeon can operate without hindrance at the time of his choice.

The death-rate should be not far from twenty per cent. in cases in which the surgeon has to wait for all of the family and all of the consultants to tell him when it is time to operate for appendicitis.

Fig. 1.—Perforated Appendix.

Among cases which I have recently operated upon are three of exceptional interest, in view of the fact that the symptoms were so mild that I did not advise operation in any one of the cases, and was pressed to do the work by the respective family physicians. All three patients were convalescing, their vital signs were almost normal, and there was no area of dulness about the appendices. Cuts of the specimens removed are here presented.

In Fig. 1, perforation had already occurred, and the opening was closed by such slight cobweb-adhesions between the tip of the appendix and the bladder peritoneum, that if the patient had sneezed fairly hard he would have opened the crater into the free abdominal cavity. In Fig. 2, there was no protecting exudate, and in a few hours more the sloughs would have escaped into the peritoneal cavity. In Fig. 3 the appendix was sharply curled and wound about with

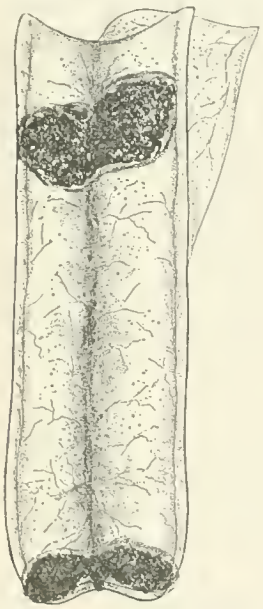


Fig. 2.—Appendix laid open to show blackish escaping sloughs. Peritoneum almost penetrated.

Fig. 3.—Appendix laid open; blackish slough through muscular wall. Peritoneum not quite perforated.

adherent omentum, so that the patient was about to start out, as one of the relapsing cases with abscess when the slough had done its work.

The three cuts explain, better than words, the reason why we should operate in mild cases, and as soon as the diagnosis is made.

133 West Thirty-fourth Street, August 12, 1892.

"**Death from Natural Causes**," was the curious verdict of the coroner's jury in the latest case of chloroform poisoning in London.

A Chlorodyne Drinker died recently in Wales, who used to take about five ounces a week of the drug.

Progress of Medical Science.

Retro-peritoneal Fatty Tumors.—Retro-peritoneal lipomata, according to Drs. Terrier and Guillemain, commence in the cellular tissue lying between the peritoneum and the posterior abdominal wall. The tumors grow slowly, and may, as they increase, remain behind the peritoneum, pushing before them the intestines which lie on their anterior surface, or they may insinuate themselves between the two layers of the mesentery, and thus give rise to one variety of tumor of the mesentery. In their advanced stages they form adhesions to the neighboring organs. Histologically they may be pure lipomata, or in some cases myxo lipomata, or in others sarcomatous myxo-lipomata. The clinical signs of this affection are far from being characteristic, and in many cases their nature is not discovered until an operation is performed or an autopsy made. They have been diagnosed as cysts of the ovary, tumors of the kidney, and as extra-uterine fœtations. The character of the swelling may be made evident by aspiration. If a cannula is inserted in the case of ovarian or mesenteric cysts, fluid will be evacuated; in the case of sarcomata, a few drops of blood will at once flow; while in lipomata nothing will be evacuated unless the cannula is left in and moved about, when a very small amount of blood will flow out. The authors diagnosed one of their cases in this way. The tumors may attain a very large size, and then, owing to their weight and to the pressure which they set up upon the blood and lymphatic vessels of the intestines, they give rise to progressive cachexia leading to death. If the tumors are smaller and they are not actively increasing in size, the prognosis is better. Owing to the size of the tumors and their extensive adhesions to neighboring structures, their removal is a matter of considerable difficulty and danger. Eleven cases have been submitted to complete extirpation, and out of these only four recovered. —*Revue de Chirurgie.*

Diet in Diabetes.—According to Dr. Leo, the limitation of carbo-hydrate food-stuffs, up to their exclusion from the diet, is looked upon as the first condition necessary in the treatment of diabetes, and the patients mostly improve under this regimen. This improvement is not, however, always maintained. Notwithstanding the diminished amount of sugar in the urine, the patient loses ground. If a moderate amount of carbo-hydrates be then allowed the general condition of the patient is often again improved. This is probably due to the increased appetite and the diminished burdening of the digestive organs with nitrogenous food-stuffs. Another point has, however, to be considered. There is no doubt that nitrogen-free food-stuffs diminish nitrogenous metabolism. In most diabetics this nitrogenous metabolism is already much augmented, and the increased nitrogenous excretion contributes to the loss of strength, and must, therefore, be taken into account. In the investigation of two cases the author was able to demonstrate this albumin-sparing action of the carbo-hydrates in diabetes even of a severe type. Other observations have been recorded in which, bread being allowed in moderate quantity, both the sugar in the urine and the quantity of the urine were increased, and yet the patient gained considerably in weight. The advantage is thus not merely a subjective but a real one. The author believes that this improvement is due to diminished nitrogenous metabolism brought about by the above-named action of the carbo-hydrates. Thus the limitation of carbo-hydrate food-stuffs is a most important matter in the treatment of diabetes, especially in an early stage, yet it may be a question how long it should be continued. The amount of sugar present in the urine should of course be repeatedly estimated, but it is quite incorrect to look upon the quantity excreted as the sole index as to the condition of the patient and the sole guide in treatment.—*British Medical Journal.*

Pharyngo-mycosis.—According to Dr. Hemenway (*Medical News*), pharyngo-mycosis is a very annoying trouble for the general practitioner. It is frequently confused with other affections, especially with follicular pharyngitis. The etiology is uncertain. Catarrhal inflammations, mouth breathing, hypertrophied tonsils, and damp, unhealthy surroundings, are predisposing causes. It is more common in females than males. Dental caries and unhealthy skin have been mentioned as causes. The form of the bacillus suggests that it is, perhaps, closely related to forms found in stagnant water. It is a chronic affection subject to exacerbations and abatements. Subjective symptoms vary from slight tickling to decided obstruction. There is frequently a hacking cough, perhaps with vomiting. The irritation frequently produces tonsillitis. Objectively, we see white or yellowish spots on the pharyngeal wall, generally projecting from the crypts if on the tonsils. Removable with difficulty and rapidly reproduced. Follicular accumulations may contain leptothrix filaments, but mycosis is composed of filaments. These filaments are clearly seen with an amplification of six hundred diameters, especially if stained with methyl-blue. In the specimens examined by the writer he frequently found leptothrix filaments, but the constant form was not leptothrix. Leptothrix. buccalis filaments are from 0.7 to 1 micro-millimetre broad, and the cells measured by the writer were seldom over 3 micro-millimetres long. The bacillus of mycosis varied in thickness from 0.4 to 0.56 micro-millimetre, generally about 5 micro-millimetres long, but sometimes 16 micro-millimetres in length. Leptothrix is frequently found on the gums. Mycosis is not found on the gums. The fungus is slowly destructive of the tissues on which it grows. It is generally more troublesome than dangerous. It may be implanted upon the Schneiderian membrane or in the lungs. Spontaneous cures sometimes occur. No treatment is satisfactory but removal by galvano-cautery. Since the bacilli thrive best in acid media, it is recommended that the negative electrode be used.

Sea-sickness.—In the *Bulletin de la Société de Pharmacie de Bordeaux*, May, 1892, the following suggestions are made in regard to sea-sickness: The effect of the movements of the vessel is that of nervous and physical depression. The best therapeutic measures for this depression consist in the use of ammonia, in muscular exercise, in plain food and spiced drinks, and in psychic aid. For grave cases, life on deck and the internal use of ammonia are indispensable.

Sulphate of Sparteine as a Cardiac Tonic and Diuretic.—The alkaloid known as sparteine was recommended as a diuretic several years ago. It is soluble with difficulty, and accordingly the sulphate soon came into use. Dr. Rohde advises no higher daily dose than three-fourths of a grain, and he finds the diuretic action always takes place (*Practitioner*). He has more frequently used sparteine along with digitalis, convallaria, or strophanthus, and found it act very well. This combination of small doses of different diuretics was in several cases borne for many weeks with an unchanging favorable action. It was repeatedly observed that diuresis set in satisfactorily only when sparteine was added. The effect of the internal administration of about one seventh of a grain four or five times daily was unmistakable in the course of twenty-four hours; and especially noteworthy was the increase in tension of the arterial system, on which followed a rise in the flow of urine. Bradycardia similar to that produced by digitalis, Rohde has never observed, but rather the resumption of a normal cardiac action where frequency had been produced by debilitating conditions, such as great loss of albumin or in consequence of influenza. From about 90 beats the frequency went down with improvement in the quality to 70, and remained at that rate without further slowing. A particular advantage of sulphate of sparteine is its ready solubility in water, and indifferent behavior to subcutaneous tissue. A large series of injections under the skin had been made with a two per cent. sparteine solution, and never were any traces of irritation seen or any complaints made about painful sensations. The subcutaneous injection shows the action upon the pulse in a few minutes. The excretion of albumin is not simply apparently less, that is from dilution, but also through a direct action of the remedy upon the primary urinary passages. Pure congestive albumin often completely disappears along with other œdema; but Rohde observed recently, in a girl ten years of age, with chronic, frequently recurring, slight nephritis of some years' standing, that after twenty-four hours' use of sparteine the albumin completely disappeared.

Common-Sense in the Treatment of Discharges from the Ear.—Dr. Duane presented to the Medical Society of Virginia a paper with this title. After showing the importance of the subject to the general practitioner, who was prone to slight it, he stated that the therapeutic principles which should be enforced here were the same that governed the treatment of suppuration anywhere else, which were comprised in cleanliness, drainage, and the removal of the badly diseased tissues. Common-salt solutions he considered the best for the thorough cleansing of the diseased part. All details should receive careful attention, especially when committed to the patient himself, as they usually were. Politzerization to force out the residual discharge might be used as an adjuvant to syringing. If this treatment did not cure, astringent powders (boric acid, alone or combined with zinc oxide) should be used, but only after thorough cleansing by preliminary irrigation. Granulations and polypi must be carefully removed (of course with a good light and the patient under full control). Alcohol, with or without the addition of corrosive sublimate, could be used to check the recurrence of the granulations. Iodoform was useful in cases of caries. Unless there was extensive caries, or the drainage was prevented either by the situation of the disease (as in the attic) or by inflammatory hypertrophy, these measures would usually be successful. If they failed, the diseased parts (drumhead and ossicles) should be removed at once, and by a specialist if possible, as the operation required great delicacy of manipulation. Dr. Duane believed that by following this treatment nearly all cases of chronic suppuration could be cured and the danger of cerebral involvement averted; also, that the necessity of doing a mastoid operation could be done away with altogether.—*New York Medical Journal.*

A New Osteoplastic Procedure for Spina Bifida.—Dr. Bobroff has described a new operation for the relief of spina bifida. The therapeutics of spina bifida are difficult and rarely crowned with success. Such procedures as compression, repeated punctures, electrolysis, incision, and ligature, belong already to the past history of surgery. The method of puncture, with injection of iodine, so warmly commended by the London Commission of 1885 as the safest and best method, is also sinking into obscurity. Plastic operations, which seek to obliterate the defect in the spine by excising the sac and closing with soft tissues, only give temporary results. On that account Dollinger attempted osteoplasty in 1885, with success. He cut with strong scissors the rudimentary arches of the fourth and fifth lumbar vertebræ, and pushed them from either side toward the median line, and there united them with a bony suture. Senenko made an incision in the sacral region on each side of the defect, chiselled off two pieces of bone, and united them in the median line with bone sutures. In four months the posterior portion of the sacrum showed an even bony surface. The author operated on a boy, eight years of age, affected with spina bifida, as follows: By means of two curved incisions the skin covering the sac was removed. The sac itself was divided one centimetre away from the spinal canal, and the stump allowed to drop in. A hole remained the size of one's fore-finger. From the upper angle of the skin wound an incision was carried to the right, along the edge of the iliac crest. The gluteus maximus muscle

was detached from the bone and pushed outward, and a piece of bone three centimetres long, two wide, and a little less than one centimetre thick, chiselled off the crest of the ilium. The piece, with some of the soft parts still attached, was brought around and fastened in the defect in the spinal canal with sutures. In order to insure union the edges of the opening were freshened. The wound was then closed, a drain being left in its lower angle. On the second day the drainage tube was removed and a compression bandage applied. In two months, most of which time the patient laid on his stomach, the transplanted piece had firmly united with the surrounding bone. Partial control over the sphincters was acquired. When the defect is situated in the dorsal region the author suggests taking the bone from the adjacent ribs.—*Medical University Magazine.*

Pregnancy and Child-bed Complicated by Chronic Heart Disease.—Dr. Schlager, according to the *University Medical Magazine*, refers to the fact that during pregnancy and labor the work of the heart is increased, that this is not accomplished through a true hypertrophy, but through a reserve energy peculiar to the healthy heart. As soon as the uterus is emptied, either an overfilling of the pulmonary circulation and right heart takes place, as was pointed out by Spiegelberg; or the right heart receives too little blood, it remaining by deficient abdominal pressure in the abdominal veins, as was advanced by Fritsch. In the first condition the heart activity is increased, in the latter the vitality of the heart sinks. Schlager agrees with the first view. These conditions are important in a heart the seat of valvular disease. Evidences of valvular disease appear usually first in multiparæ, as earlier it was compensated, and not until the beginning of the muscular degeneration and increased functional activity are evidences of insufficiency apparent. These appear especially intra-partum during the expulsive pains and after the labor. From the last twenty-five cases in the Berliner Frauenklinik, Schlager draws the following conclusions: After a number of labors, in a woman the subject of heart disease, the probability of spontaneous abortion is greater. The complication of pregnancy with heart disease is very dangerous; the prognosis for early heart disease is most doubtful, for advanced, serious. The prognosis in patients with unfavorable surroundings is worse than in the well to-do. Among the single valvular affections mitral stenosis appears to be the most dangerous. In the twenty-five cases, two died intra-partum and ten during the puerperium. Of the children, 29 per cent. were stillborn, and only 46.5 per cent. lived. As to therapeutics, Schlager thinks that all females suffering from heart disease should unconditionally be advised not to marry. During pregnancy, rest and nursing should begin with the first months. For albuminuria the milk diet; for the symptoms of insufficiency the customary remedies. Abortion should only in the most urgent cases be produced, on account of the unfavorable results of this operation in heart patients. In the management of labor the guiding precept should be to deliver the patient as quickly and as easily as possible by the appropriate operation in each case. A mild chloroform narcosis is desirable in order to spare the heart the great nervous excitement. The child must be very slowly extracted and immediately afterward a sandbag placed upon the abdomen, in order to combat the sinking abdominal pressure. The pulse must be continually observed. Ergotine or ergot should only be used in urgent cases, as they by contraction of the vessels oppose the heart. During the puerperium the diet must receive attention, and long rest in bed is desirable.

Death after Intra-uterine Injections.—The Berlin correspondent of the *Medical Press* writes that when injections into the cavity of the uterus are so notoriously dangerous, it appears strange that many gynecologists still persist in making them. There are recent reports of a number of cases in which death has taken place under these distressing circumstances, more distressing to the operator from the fact that he knows he has been employing a double-edged weapon in his fight with the disease. Tarnier reports three cases. Two patients died after intra-uterine injection of sublimate, and one some hours after an injection (0 5 per cent.) of sulphate of copper. After injections of two per cent. of carbolic solutions he has repeatedly seen syncope from entrance of the fluid into the blood. As a writer points out, certain authors give reports as to the innocuousness and good effects of such injections, but the great dangers attending them are not pointed out. Although scores of deaths have followed the injection of perchloride of iron in post-partum hemorrhage, the introducer of this method of treatment has not yet, as far as your correspondent is aware, admitted that the treatment is in any way disastrous. In another case reported in the same journal, two grams of liq. ferri sesquichlor. were injected drop by drop into the uterus by means of a Braun syringe, and the return of the fluid through the sufficiently dilated cervix observed. The uterus was afterward washed out with a two per cent. solution of carbolic acid. Two hours and a quarter after the patient died. She had attended the clinic on account of retroversion of the uterus and chronic endometritis. The autopsy revealed extensive thrombosis of the uterine veins which extended to the right internal iliac as far as the bifurcation of the common iliac.

A New Method of Extirpation of the Rectum.—Dr. Schelkly describes a new method of extirpation of the rectum. The patient is placed in the lithotomy position, the buttocks brought to the edge of the operating-table and raised, so that the intestines may fall back into the abdominal cavity (*British Medical Journal*). A skin incision is then made, commencing at the inner margin of the right ischial tuberosity, and carried over the coccyx to the left ischial tuberosity. The coccygeal attachment of the sphincter ani is next divided close to the bone. With the left forefinger the perirectal connective tissue is separated, and with a pair of scissors the levator ani muscle is divided, first to the left, then to the right, as far as the limits of the skin incision. The posterior wall of the rectum at this stage of the operation usually appears in the bottom of the wound. If it is necessary to expose the pelvic organs further, it is advisable to divide the coccyx by a transverse incision. The part of the rectum to be removed is next separated from the surrounding tissues, and is then cut across transversely just above the sphincter ani externus. The rectum is seized with forceps, and further separated from its surroundings until the upper limit of the disease has been passed. In cases of carcinoma which extend high up, it is necessary to open the pouch of Douglas. The part of the rectum above the seat of disease is so separated and made movable, that after the diseased part has been resected it is drawn down and sutured to the lower segment which was left just above the anus, without giving rise to a state of tension. In cases where the pouch of Douglas has been opened, the aperture is closed up with sutures before the rectal segments are brought together. This method of operation is applicable, according to the author, to rectal carcinomas (even when placed high up), to syphilitic strictures, to congenital strictures, and also to some forms of pelvic growth. Schelkly himself has operated in this manner five times: three times in rectal carcinomas not high up, once in syphilitic stricture, and once in congenital atresia recti. All these cases recovered. In a sixth case a carcinomatous tumor was removed from the middle of the sigmoid flexure, together with part of the mesocolon. The part of the sigmoid flexure above was brought down and sutured to the upper part of the rectum below. The patient died about three weeks after the operation. In the seventh case two and a half inches of the rectum were removed, Douglas's pouch opened, and an ovarian cyst and the

Fallopian tube removed. The pedicle was dropped back, and the aperture closed with silk sutures, and then the intestine treated as described. The patient made a good recovery, and five months afterward had no signs of recurrence of the disease. The eighth case, a patient with carcinoma recti, died two days after the operation.

Laparotomy in Tuberculous Peritonitis of Children.—Dr. Aldibert reviews the results of this method of treatment (*University Medical Magazine*). Although the performance of laparotomy for tuberculous peritonitis in children is of quite recent date, the author was able to find fifty-two recorded cases. From a surgical point of view they may be divided into three classes: the ascitic, the fibrinous, and the ulcerous. The ascitic may be subdivided according to their course and localization into acute, subacute, chronic generalized, and chronic encysted. The fibrinous may be divided into the dry chronic, properly so-called, and the fibro-adhesive, according as there are or are not present adhesions between the intestinal loops themselves and between the intestines and abdominal walls. The ulcerous class may be divided into those which are dry and those which suppurate, and the latter may be either generalized or encysted, sometimes in a single place, sometimes in several. Out of 32 cases of the ascitic form, there was 1 death following operation. In the subacute, out of 6 cases there was 1 death from generalized tuberculosis, at the end of a month. The other 5 cases recovered. Of 16 cases of the chronic generalized form, 1 death occurred from tubercular meningitis, the remaining 15 cases recovering. In the chronic encysted form, out of 9 cases, there were no deaths. These statistics show the excellent results in laparotomy for the ascitic forms, and they improve as the cases are more chronic and the effusion more encysted. It also demonstrates the superiority of surgical intervention over medical treatment. Of 12 cases of the ascitic form, 5, or forty-one per cent., appear to have been definitely cured. In the fibrinous form 3 out of 6 cases were known to have remained cured. In the ulcerous form the results have not been good where there have been several separate pockets in different parts of the abdomen, but are better where they have been more localized. To sum up, of 46 cases of tubercular peritonitis in children, there were 4 deaths and 42 cures, a mortality of 8.6 per cent. and 91.4 per cent. of cures, of which about one-quarter were permanent. In no case was death directly due to the operation, and when a cure was not obtained the case was nevertheless improved. The disappearance of the tuberculous growths and nodules after laparotomy has been performed has been observed several times. One is justified in concluding that laparotomy when done in an aseptic or antiseptic manner is not dangerous, that it cures tuberculous peritonitis, and that the successes which it gives is more than can be gotten by means of medical treatment; but one should remember that it is not applicable to every case of tubercular peritonitis, because some of them are beyond the resources of surgery.

Hypertrophied Tonsils and Ignipuncture.—In the case of children, Dr. Barrett prefers the guillotine, as being much more speedy and direct, and involving practically no risk. But in the case of adults, so many cases of serious and occasionally fatal hemorrhage have occurred that, for some years past, he has ceased to remove them with any form of cutting instrument. The hemorrhage has been chiefly parenchymatous, and in one case at least could not be arrested even by ligature of the common carotid. The method he now employs is as follows: The throat is sprayed with a five per cent. solution of cocaine once or twice, and in two or three minutes the patient is ready for operation. He uses the Paquelin cautery with a stout terminal (2 mm. in diameter), curved at the point at right angles. This is raised nearly to white heat, the tongue is held down with a depressor, and the hot point is driven into the centre of the tonsil to the depth of from one-eighth to one-fourth of an inch. It is then re-introduced and driven in in a similar manner, till the whole surface of the tonsil is riddled. The patient finds it much more comfortable if pauses for a few seconds are made from time to time, and the depressor removed. After the whole surface has been riddled, he frequently re-introduces the cautery for the purpose of breaking down the partitions left between the various pits, so that the ultimate effect of the cauterization is to leave a large hole in the tonsil. The proceeding is very nearly painless, so long as care be taken to avoid touching any part of the pharyngeal mucous membrane or the tongue. If, however, those parts are touched with the cautery, the pain is very considerable. Local reaction follows the operation, and there is frequently a feeling of malaise and indisposition for from twenty-four to seventy-two hours. The sloughs separate in from three to seven days, and the tonsil then atrophies.—*Australian Medical Journal.*

Zymotic Diseases.—In a recent address, Dr. Broadbent, in speaking of the term "zymotic disease," said that when he was a student the word had already obtained a footing in medical terminology, but under protest from many distinguished men who distrusted theory of all kinds (*The Boston Medical and Surgical Journal*). It was pointed out that the analogy between the action of yeast on a solution of sugar and the course of a fever was but weak at best, and was open to the objection that the successive stages of incubation, invasion, and decline might represent not the life and work and organism in the system, but the stages of the reaction of the system. Especially were we warned against basing treatment upon such uncertain grounds. Now we know that the parallel holds good down to the smallest particular, just as the yeast grows and multiplies with extraordinary rapidity, splitting up the sugar into carbonic acid and alcohol till its further progress is arrested by the alcohol which is a product of its own activity, so the bacteria multiply at the expense of the fluids of the body, form ptomaines which, like alcohol, act as poisons to the nervous system, and which, again, like alcohol, bring the action of the microbes to an end. Our methods of protection against fevers are now entirely derived from definite knowledge of the life history of the bacteria or microbes by which they are caused, and our treatment will be more and more determined by such knowledge. We are shown, also, how the defensive processes may be reinforced or impaired. It is well known that drunkards fall ready victims to fever, erysipelas, and septic diseases generally, and the general deterioration of the tissues produced by alcoholic excess has been accepted as a sufficient explanation. But this, while true, is not the whole truth. A bacteria culture of a given kind and degree of virulence is injected under the skin of a rabbit, local inflammation and perhaps abscess follows, but the animal does not fall a victim to the poison. In another rabbit, or in the same at another time, an injection of the same kind is made, but simultaneously a dose of chloral is injected into some remote part of the body; the local reaction is imperfect, general infection rapidly takes place, and the creature very soon dies. Chloral paralyzes the leucocytes, so that when bacteria are introduced into the subcutaneous tissue they take no notice of them, but remain perfectly passive, and leave the way open into the lymphatic spaces. Alcohol in excess has a similar action on the leucocytes, and this, as well as the deteriorating influence on the tissues of chronic alcoholism, predisposes to septic infection. A single debauch, therefore, may open the door to fever or erysipelas.

Alkalies in Pruritus.—In *Nouveaux Remèdes*, Lange records good results from the use of alkalies in four rebellious cases of pruritus. The urine was charged with uric acid and urates. Bicarbonate of soda, carbonate of lithium, and alkaline waters were used, with the effects of curing the pruritus in a few months.

MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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A PROSPECTIVE NATIONAL QUARANTINE.

THE bill granting extra quarantine powers and imposing additional duties upon the Secretary of the Treasury and the Marine Hospital Service passed the Senate on Wednesday. Senator Harris, who is the introducer of the bill in question, and whose long service in legislative matters connected with the prevention of the introduction of epidemic diseases into the United States, entitles his views to great respect, has given a practical solution to a question of the greatest moment to the entire nation.

On a former occasion, while discussing the respective merits of this and other bills bearing upon national protection against the introduction of cholera and other infectious diseases in the United States, the MEDICAL RECORD declared unqualifiedly for the establishment of a national quarantine. There has been no mistake made in interpreting the drift of opinion regarding the utility of this measure, as is evidenced by the prompt and unanimous adoption of the bill in question. Its general provisions are comprehensive and its details are susceptible of a systematic and practical accomplishment. While acknowledging that immigration is accountable for the introduction of cholera into this country, it does not aim to prevent immigration altogether, as advocated by Senator Chandler, but simply vests the power of suspension in times of great emergency with the President.

It makes it unlawful for any merchant ship or other vessel from any foreign port, to enter any port of the United States except in accordance with its provisions, and with such rules and regulations of State and municipal health authorities as may be made in pursuance of or consistent with it, under a penalty not exceeding $5,000. Any vessel at any foreign port clearing for any port in the United States shall be required to obtain from the United States consular officer at the port of departure, or from the medical officer where such officer has been detailed by the President for that purpose, a bill of health in duplicate, in the form prescribed by the Secretary of the Treasury. The Marine Hospital Service is to co-operate with and aid State and municipal Boards of Health in the execution and enforcement of the rules made by the Secretary of the Treasury to prevent the introduction of contagious or infectious diseases. And further the bill says :

"Whenever it shall be shown to the satisfaction of the President that, by reason of the existence of cholera or other infectious or contagious disease in a foreign country, there is serious danger of the introduction of the same into the United States, and that notwithstanding the quarantine defence this danger is so increased by the introduction of persons or property from such country that a suspension of the right to introduce the same is demanded in the interest of the public health, the President shall have power to prohibit, in whole or in part, the introduction of persons and property from such countries or places as he shall designate, and for such period of time as he may deem necessary."

An appropriation of $1,000,000 is made to enable the President to carry the act into effect. Compensation is to be made for quarantine buildings and property received from States or municipalities. The act of March 3, 1879, establishing the National Board of Health, is repealed.

It would thus appear that the aim of the general government is to aid the State and municipal authorities rather than to interfere with the same, thus reconciling in a rational, satisfactory, and harmonious manner the legal responsibilities of each. There is no reason why this could not be done in the larger as well as in the smaller ports, thus making the protection along the entire coast line uniform, comprehensive, practical, and thoroughly efficient.

The appropriation is certainly liberal enough with the plant already at hand, and care should be taken to guard against an extravagance of outlay which the alarm and excitement of the present moment might easily and apparently innocently invite.

THE CHOLERA EPIDEMIC OF 1892 IN NEW YORK.

THE report of Dr. H. M. Biggs, Chief Inspector, Division of Pathology, Bacteriology, and Disinfection, recently presented to the Health Department, gives a succinct history of the cases of cholera observed in this city in the month of September last. The bacteriological examinations were conducted by Dr. Biggs, assisted by Dr. Edward K. Dunham of the Carnegie Laboratory, and they were relied upon almost entirely to establish the diagnosis in all suspected cases. This was not the first time, however, that such examinations have been made here, and it is not generally known, at least not generally remembered, that a possible epidemic of cholera in this country, five years ago, was averted by the action of Dr. William M. Smith, then Health Officer of the Port, based upon the results of a biological examination made at that time. A child had died on an incoming vessel from what was supposed to be cholera morbus. In order to be certain of his position, however, Dr. Smith inoculated some culture-tubes with the intestinal contents of the child and sent them for examination to Drs. Prudden, Biggs, and Weeks. These three observers, working independently, found the comma-spirillum present, and so reported to the Health Officer. The four hundred immigrants were accordingly removed from the vessel and detained, and the wisdom of this course was demonstrated a few days later by the occurrence of several cases of Asiatic cholera among them. Had the bacteriological examination not been made, these immigrants would probably have been allowed to come up to the city, and we should then have had an outbreak of cholera in New York.

The first suspicious case in the city in 1892 was one seen by Dr. Deshon, the clinical report of which has appeared in these columns. The post-mortem examination revealed the presence of lesions such as may be found either in sporadic or in epidemic cholera, and as the microscopical examination of the intestinal contents was negative the provisional conclusion was reached that the case was one of sporadic cholera simply. This diagnosis was strengthened by the fact that no evidence of exposure to infection from epidemic cholera was obtainable. It was determined, however, to institute a biological examination, and the result of this very soon made it evident that the case was one of true Asiatic cholera. In view of the gravity of the decision, it was deemed advisable to withhold the official report until the diagnosis had been confirmed by Dr. Prudden. A report correcting the original diagnosis was then forwarded to the Health Department on September 14th.

During the following month twenty-three other suspicious cases were examined, and ten of them found to be epidemic cholera. Of the latter, one occurred in New Brunswick, N. J. Nine of the eleven cases of true Asiatic cholera (including the one first examined) resulted fatally, but none of those diagnosed as sporadic cholera died. In order to remove all possibility of doubt concerning the diagnosis of several of these cases, cultures were sent to Drs. Prudden and H. P. Loomis, of this city, Harold Ernst of Harvard University, Sternberg, Deputy Surgeon General, U. S. A., then detailed as consulting bacteriologist at Quarantine, Byron who was in charge of the hospital on Swinburne Island, Welch of the Johns Hopkins University, and Petri, chief of the Bacteriological Department of the Imperial Board of Health of Germany. The presence of the true comma-spirillum of Koch was found by all these observers in the cultures sent them, and Dr. Sternberg and Byron also confirmed the identity of these micro-organisms with those found in the cases occurring on the cholera-infected vessels and on Swinburne Island.

There can be no doubt, therefore, that there were ten cases of epidemic cholera in this city in the fall of 1892, and that there were not more may justly be attributed to the active watchfulness and energetic measures of repression put in force by the officials of the Health Department.

THE MEDICAL RECORD—ITS PAST AND PRESENT AND FUTURE.

With the completion of the forty-second volume of the Medical Record, and with the existence of the journal for more than a quarter of a century under the same management, it is a matter of congratulation to note its continued prosperity and its growing appreciation with the medical profession. From a modest beginning it has grown so steadily in the capacity and worth of its material, that it has again been deemed advisable to increase still further the number of its pages, and to enlarge correspondingly its capacity for usefulness to its subscribers, contributors, and advertisers. With the present volume, therefore, as will have been already noted in the number for last week, there will be an increase of four extra pages *to each issue*, making an aggregate addition for the year of over four hundred double columns, equivalent in their turn to an ordinary-sized octavo of nearly eight hundred pages, *with no increase of cost to its subscribers.*

The conviction must force itself upon everyone that a success unprecedented in American medical journalism, and we believe in the world, has been attained by a wide-spread appreciation of its policy of independence, fairness, and enterprise.

In the light of its past history, and from its first issue in March, 1866, until the present, it can truthfully be said that its plan has been consistently and impartially carried out in the spirit and letter of its original announcement. In such respects it has always been the same, as is shown by the following extracts from the first editorial by the same writer who still holds the pen with a new encouragement for the future :

"Its object will be to present to the profession a faithful record of the existing state of medical science in everyone of its many departments ; and as it is more especially intended to meet the wants of the general practitioner, all the articles in its columns will be thoroughly practical in their character.

"The current topics of the day will be freely and independently discussed, and no effort on our part will be spared to render ourselves well informed with reference to them, in order that we may be able to present such news to the profession as a body as shall be considered worthy of serious attention on its part.

"Impartial to all, unjust to none, it is our purpose, so far as we are enabled to understand the right, not to hesitate on the one hand to point out the way which, by the correction of certain abuses, may lead to a still higher development of professional excellence, nor to be backward in upholding the claims and discussing the merits of the various vexed questions which are ever arising to claim our attention. Committed to the profession as a whole, it shall be our constant endeavor to keep the columns of the Record free from any element that may favor cliqueism or party spirit, and in the discussion of all subjects, great and small, to exercise that spirit of charity and honesty which must always attach itself to the side of truth, and commend itself to the sanction of every independent thinker."

The Record takes a fresh start with a reiteration of the same policy, convinced by a long and varied experience that it is the one which can best subserve the truest aims and highest purposes of a journal devoted to the deeper interests of the medical profession. As in an impartial court, the greatest care must be exercised in the future as in the past, in the decisions which are rendered on questions of scientific fact and matters of purely professional interest. Nothing can or will be knowingly introduced into the Medical Record as an endorsement or advocacy of any medicinal preparation, apparatus, or institution which can be directly or indirectly construed as a business advertisement.

Our advertisers, whose name is now legion, so well understand and so thoroughly appreciate the value of such a course, that they have ceased to ask for editorial endorsements. This is as it should be. Each advertiser stands upon his own merits, his wares are presented in his own way to the same readers as peruse the inside pages, and what is shown to be of value is generously appreciated by the readers. It has been the constant aim

of the publishers to admit such advertisements only as shall be trustworthy business guides for the physician, while it has been claimed as their privilege to decline every advertisement that does not come up to the required standard.

THE MICROBE OF ERYSIPELAS.

The streptococcus of erysipelas plays a very important part in human affairs. It seems to be demonstrated to-day that this microbe and that of suppuration are only varieties of the same species. And that this species causes sometimes pyæmia and septicæmia, sometimes erysipelas. It is found also in some infectious forms of joint inflammation, in ulcerating endocarditis, in bronchopneumonia, in pseudo-membranous inflammations, and in tuberculous lung cavities. It grows on the skin, on the mucous membranes, and in the mouth. An organism of such varied power and distribution deserves study, and the experimental investigations recently made concerning it by Dr. H. Roger, in Bouchard's laboratory, have a practical interest (*Revue de Médecine*, December, 1892).

Dr. Roger found that cultures of this coccus injected into the veins of rabbits caused sometimes an acute septicæmia, sometimes a chronic malady characterized by a progressive cachexia and polio-myelitis with muscular atrophy.

Inoculated under the skin they caused fatal septicæmia, erysipelas, or simple abscess, according to the virulence of the lesion. Immunity against the infection was secured by various procedures, such as the injection or inoculation of attenuated products. If the microbe was cultivated in serum taken from vaccinated animals, a growth was obtained which had little virulence; in other words, the serum "attenuated" the microbe. On the other hand, if the organisms were grown in serum from non-protected animals their virulence was increased.

The practical and clinical problem which ought to be next attacked is whether the attenuated microbe can do any good in animals or persons already affected with the erysipelas poison. This interesting stage of the investigation was not reached by Dr. Roger. We trust that he will continue his studies until its difficulties have been solved.

NEWSPAPER MEDICINE.

The interest which the public take in matters medical is daily increasing, if one may judge by the publicity constantly given in the press to the common problems of pathology and therapeutics. This interest is being taken advantage of by the shrewd managers of our dailies, and a quasi medical department is a standing feature in most of their issues. But some of our contemporaries are going still further and are undertaking therapeutical functions. An evening paper of this city has established several dispensaries where an alleged inebriety-cure is being dosed out to the credulous and alcoholic. Another paper has taken up a so-called consumption-cure, and has selected "twelve test-cases," to be submitted to the new treatment. The histories of these patients are given with much painful detail, and the names of the director and his staff of physicians are exploited. The composition of the cure is a secret, but despite this the newspaper deliberately undertakes the responsibility of seeing it administered. The folly and cruelty of such a performance must be apparent to all. Consumption is a disease which in certain stages cannot possibly be cured, any more than an amputated leg can be replaced. The lung-tissue is gone, and it is replaced by a suppurating mass. A disease which has such phases, and yet which runs so variable a course in its early stage, cannot safely be submitted to newspaper medication by secret medicines, and under the auspices of persons whose names and reputation are totally unknown. If an individual is not allowed to practise medicine without a license, why should a newspaper be permitted to do it?

A MISSIONARY MEDICAL COLLEGE

The Board of Regents of the State University have recently granted, conditionally, a charter providing for the organization of a "Missionary Medical College" in this city. The proposed institution is to be under the auspices of the International Medical Missionary Society. This Society has head-quarters on East Forty-fifth Street, where lectures have been given for several years. The Society supports six dispensaries in New York, and two in Brooklyn, under the general supervision of a medical director.

A few years ago this Society attempted to secure a charter from the State Legislature enabling it to teach medicine and grant diplomas. The bill was so loosely drawn, or at least made such slight demands on those wanting a medical diploma, that it was strongly opposed by the Legislative Committee of the State Medical Society, and its passage prevented just in time. We are told now that it was "withdrawn" by its backers, but our impression obtained at the time was that it was beaten out of sight. Under the new charter the provisions or conditions which may prevent the new college from ever becoming a diploma-mill seem reasonably good. These conditions are:

"1. No students are to be received except those pledged to do missionary work.

"2. The candidate must present either a certificate of admission to a college approved by the Board of Regents, or a certificate of graduation from an approved high school, or he may be admitted without these certificates by passing examinations under the Board of Regents and securing fifty counts. The requirement for other medical schools is only sixteen counts.

"3. The prescribed course of study is to cover four years of nine months each.

"4. The graduates of this school must pass the same examinations under the State board as the graduates of the other regular schools in order to receive certificates of graduation."

The objects of the school are praiseworthy; whether its organization is wise or necessary may well be questioned. It is a difficult and expensive thing to educate medical students properly, and no new college can do it without much labor. It would be a mistake to think that a poor doctor may be excused because he is a good Christian. The new college will bear watching.

Restaurant Coffee, according to a Paris journal, is a mixture made of horse-liver roasted in the oven, black walnut sawdust, and caramel.

News of the Week.

Typhus Fever is being kept pretty well in hand by the Health authorities. A few new cases occur every day, and the total number up to January 10th was 121, with 30 deaths. A few new centres of infection have developed and one case has possibly infected certain families in Brooklyn. On the whole there is little reason to fear a severe epidemic.

Lectures on Biology.—The following lectures will be given by the Department of Biology, in room 11, Library Building, Columbia College, beginning on Thursday, January 12th and continuing every successive Thursday evening, at eight o'clock, till April 27th. They are designed for those who desire to keep abreast of the later advances in biology without entering any of the technical courses. Tickets for these lectures will be issued to such students as desire them, without charge, on presentation of their matriculation tickets for the current year. A limited number of tickets for the entire course will be issued to persons not students, on payment of five dollars. Application should be made to the Secretary of the President, Columbia College. The lectures will be delivered as follows:

By Edmund B. Wilson, Ph.D., Adjunct Professor of Biology: "The Cellular Basis of Heredity and Development." Thursday, January 12th, "The Germ-cells—Sex and Fertilization;" Thursday, January 19th, "Cell Genesis and Division;" Thursday, January 26th, "Egg and Spermatozoön — the Preparation for Development;" Thursday, February 2d, "Physiology of the Individual Cell;" Thursday, February 9th, "Intercellular Dynamics—Theories of Heredity."

By Bashford Dean, Ph.D., Instructor in Biology: "The Origin and Evolution of the Fishes." Thursday, February 16th, "The General Structure of Fishes;" Thursday, February 23d, "Sharks and Rays—Fossil and Recent;" Thursday, March 2d, "The Teleosts;" Thursday, March 9th, "The Ganoids;" Thursday, March 16th, "Chimæra and the Lung-fishes—the Newbury Collection of Giant Placoderms;" Thursday, March 23d, "The Embryology of Fishes."

By Arthur Willey, B.Sc., Tutor in Biology: "Amphioxus and Other Ancestors of the Vertebrates." Thursday, March 30th, "Introduction—History, Mode of Life, and Distribution;" Thursday, April 6th, "General Structure;" Thursday, April 13th, "Nervous, Vascular, and Excretory Systems;" Thursday, April 20th, "Reproduction and Development;" Thursday, April 27th, "Larval Growth and Metamorphosis—Relationships of Amphioxus to other Types."

The Third Congress of American Physicians and Surgeons.—The first meeting of the Executive Committee was held on December 27, 1892, in Philadelphia. The committee was organized by the election of Dr. William Pepper, of Philadelphia, as chairman, and Dr. Newton M. Shaffer, of New York, as secretary. The following officers of the Congress were elected: *President*, Dr. Alfred L. Loomis, of New York; *Secretary*, Dr. William H. Carmalt, of New Haven; *Treasurer*, Dr. John S. Billings, of the army; *Chairman of the Committee of Arrangements*, Dr. Samuel C. Busey. It was decided to hold the next meeting in Washington in May, 1894.

New York Academy of Medicine.—The following officers were elected at the meeting held January 5th, *President*, Dr. D. B. St. John Roosa; *Vice President*, Dr. L. A. Stimson; *Trustee*, Dr. A. M. Jacobus; *Committee on Admission*, Dr. R. A. Van Santvoord; *Committee on Library*, Dr. Frederic Peterson; *Delegates to Medical Society of the State of New York*, Drs. H. D. Chapin, Hobart Cheesman, H. C. Coe, W. M. Ewing, and Leroy M. Yale.

The Alumni Association of the Woman's Hospital will hold their Annual Meeting at the New York Academy of Medicine on Tuesday and Wednesday the 17th and 18th of January. Dr. John G. Perry, of New York, will preside as President of the Association. The custom of reading papers will be superseded by the discussion of topics assigned before the meeting. The topics assigned for this meeting are as follows: "Pelvic Adhesions," "The Treatment of Extra-uterine Pregnancy," "When Should the Parturient Woman be Allowed to Assume the Upright Posture." Dr. Thomas Addis Emmet will read a paper entitled "The Founders of the Woman's Hospital Association," and Dr. Dudley, of Chicago, will present a new operation for the cure of procidentia. It is impossible to get a good attendance of New York members at a morning session, and that this time may be made most interesting to the out-of-town members a number of eminent surgeons have promised to make a special effort to secure operations of the abdominal viscera to occupy these morning hours. These operations are not frequently seen by gynæcologists and are of great practical importance to them.

Bad Ventilation of the Academy of Medicine.—A good many comments are made upon the conspicuously wretched ventilation of the various rooms of the New York Academy of Medicine. Though the building was built under medical supervision, the ventilating feature seems to have been left out. The "official temperature" of the library, we have been told, is 72° F. This is rather high for anyone who has not a bad heart or senile arteries; some gentlemen find it impossible to study in the rooms because of the heat and pulmonary excreta.

Celtic Medical Club.—At a meeting of the Celtic Medical Club, held at the residence of Dr. Thomas H. Manley, on Thursday, December 29th, Dr. Constantine J. Maguire was elected president, to succeed Dr. Manley; Dr. Joseph F. Gray, as vice-president, to succeed Dr. John Dwyer; and Dr. Joseph Merrigan was elected as secretary, to succeed Dr. Wm. O'Meagher.

Dr. Frank C. Hoyt, of St. Joseph, Mo., Pathologist and Assistant Physician at Asylum No. 2 in that city, has been appointed Superintendent of the Insane Asylum at Clarinda, Ia. Dr. Hoyt was the founder and for eight years editor of the St. Joseph *Medical Herald*, and is now connected in an editorial capacity with the *Medical Fortnightly* of St. Louis.

Dr. F. J. Young, President of the Bridgeport Board of Health, died while attending a banquet of the Danbury Medical Society on January 5th. He left the banquet-table for a few minutes, and was found lying on the steps leading from the room. He died in about five minutes. Dr. Young was about fifty-five years old, and had been a practising physician in Bridgeport for twenty years.

Reviews and Notices of Books.

TEXT-BOOK OF NERVOUS DISEASES. Being a Compendium for the Use of Students and Practitioners of Medicine. By CHARLES L. DANA, A.M., M.D. One volume, post-octavo, 520 pages. Illustrated by 210 Wood Engravings and a Plate. Bound in red parchment muslin. (American Series of Medical Text-Books.) New York: William Wood & Co. 1892.

To make up this book, according to the preface, "each subject has been taken, all the available facts ascertained, the writer's own facts collated, and with the data thus gathered the chapters have been written." The result is an admirable guide to the student of neurology and to the general practitioner, the work as a whole presenting in concise form the science of neurology as it exists at the present day. This "Text Book of Nervous Diseases" is essentially modern, and is the best yet issued by any American publisher. It is direct, plain, practical, always sufficient in detail and never prolix, orderly in arrangement and sufficiently broad in outline. By a system of condensed tables and notes the writer has managed to compress into a small space an extraordinary amount of useful and necessary information. In this particular the whole work is thoroughly characteristic and original.

The first chapter considers the general anatomy of the nervous system. The second gives the method of studying, general symptomatology, and technical terms. These chapters contain admirable short definitions, remarkable for clearness as well as brevity, and serving to render less the difficulty of all beginnings. Then follows a view of the physiognomy and stigmata of nervous disease, together with that of causes and pathology. Under treatment, hygiene, and prophylaxis are considered the distinctive value of diet, exercise, hydrotherapy, of climate and electrotherapy, and of massage, drugs, and external applications. The relief and prevention of nervous diseases, many of which cannot be cured, are best brought about by self-denial and by activities, by rest and exercise, by the application of "sweet reasonableness" and sound intellect to every-day affairs. "Adults need to keep in mind but two words—moderation and exercise. With these they need not fear the use of alcohol, tobacco, tea, coffee, or even occasional irregularities in sleeping and eating." Elsewhere, also, is manifest a confidence in the reserve forces of nature, and in powers at present unnumbered and unmeasured by medical consciousness.

The second part of the book treats of the anatomy and diseases of the cerebro spinal nerves; the third, of the anatomy and diseases of the spinal cord; the fourth deals with cerebral anatomy and cerebral disorders, and the fifth is devoted to functional nervous diseases. The statement is made that there are about sixty five nervous diseases which are either very common or extremely important. Of these, thirty are peripheral, thirteen belong to the spinal cord, twelve are disorders of the brain, while ten are functional. There are also one hundred and eleven rare forms of nervous disease. While the pathology of the various conditions that are considered is but briefly delineated, it is in accordance with the progressive spirit that characterizes modern biological research. A good general idea of the anatomy of the nervous system is made possible by means of numerous illustrations—the book containing two hundred and ten in all—by charts and diagrams. One important feature is conspicuous by its absence, and that is a good index. A good index, like a good friend, always makes other good things seem better. But this oversight can shortly be remedied in the newer edition.

The author of the "Text-Book" is remarkable for sincerity and the absolute honesty that gives honor where honor is due. While admitting the excellence of things German and French, Dr. Dana acknowledges with equal frankness the power of good American work and generously recognizes ability on this side of the Atlantic. Then, too, he has everywhere the courage of his convictions. Speaking of hypnotism, he says: "The ecstatic states of the saints and the nirvana of the Buddhists are forms of hypnotism; so also are the trance states into which some clairvoyants and spiritualistic preachers place themselves; this same curious phenomenon is at the bottom of the so-called 'mind-healing' science, and it enters into rational therapeutics and orthodox religion. The capacity of the human mind for hypnotism or semi-hypnotic states is, therefore, a most curious and important fact. . . . The practice of using major hypnotization is injurious, tending to exhaust the nervous force and weaken the will. . . . It may relieve symptoms in the hysterical for a time, but it cannot be of permanent benefit and is likely to lead to actual harm. . . . The general popularization of hypnotism by means of mind cures, Christian science, etc., accomplishes its results at the expense of mental demoralization; and faith-healing institutes are more pernicious elements in society than gin-mills." And again, speaking of chorea: "The seat of the lesion in chorea is in the gray matter of the cortex and its meninges, the pyramidal tract, lenticular nuclei, and the spinal cord. The lesions are in acute cases of the nature of intense hyperæmia, with dilatation of vessels, small hemorrhages, and spots of softening. There is infiltration of the perivascular spaces with round cells and swelling and proliferation of the intima of the small arteries. In chronic cases the evidences of active vascular irritation is less, but there are perivascular dilatations and increase of connective tissue. The process suggests a low grade or initial stage of inflammation. The cause of this is probably either an infective micro-organism or a humoral irritation similar to that causing the rheumatic symptoms and the heart lesions. . . . The hyperæmic process may not be confined to the meninges and motor areas, but it is only from the disease in these parts that the symptoms of chorea arise. The presence of points of irritation in the cortex and its meninges and in the deeper parts excites irregular discharges of nerve-force and produces the choreic movements. The interruption of the voluntary nerve-impulses by diseased foci makes these movements irregular. The apparently special involvement of the lenticular nuclei may explain some of the incoördination." And this concerning epilepsy: "To sum up: The anatomical basis of idiopathic epilepsy consists in a nuclear degeneration and later a vacuolation of the cortical cells, beginning and most pronounced in the cells of the second layer. Also a proliferation and increase in the neuroglia tissue, this occurring most markedly in various islets or special areas of the cortex. The blood-vessels and connective tissue are involved only secondarily and later."

It will readily be perceived, from this brief survey, that the "Text-book of Nervous Diseases" is a definite and real addition to medical literature. It occupies a place all its own, and becomes more useful with every reading. While sufficiently conservative, it is always modern, and everywhere in sympathy with the best spirit of the times. It is impossible to imagine more information in the same space, or any book of its kind that will give a greater return for patient study.

DISEASES OF THE CHEST, THROAT, AND NASAL CAVITIES, including Physical Diagnosis of the Diseases of the Lungs, Heart, and Aorta; Laryngology and Diseases of the Pharynx, Larynx, Nose, Thyroid Gland, and the Œsophagus. By E. FLETCHER INGALLS, M.D., Professor of Laryngology and Practice of Medicine, Rush Medical College, Chicago, etc. Second edition, revised and enlarged. With 240 Illustrations. 8vo, pp. 675. New York: William Wood & Co. 1892.

AN attempt to cover as much ground as is implied in the title of this treatise is a bold step. It suggests either great temerity on the part of the writer or an enviable self-possession. It means either a commonplace book

full of therapeutic platitudes or else those records of personal clinical experience which go to make up some of our most valuable literature. To those who have known of Dr. Ingalls's work along his special lines no suggestions are necessary as to the category in which this volume is found. It is the work of a specialist along broad lines, and of one whose specialism is the concentration and essence of years of general practice. It is therefore liberal, yet definite, in its teachings.

The first section treats of diseases of the chest. Four chapters are devoted to physical diagnosis, six to pulmonary diseases, and five to maladies of the heart and large vessels. In the years elapsing between the two editions no marked changes have occurred in our general knowledge upon these topics. The pathology of tubercle has become better understood, and many new plans of treating pulmonary phthisis have had their day and been forgotten. We note in passing that the author makes no reference here to tuberculin, and that also he commends especially creosote and the so-called Shurly-Gibbes method of treatment with hypodermic injections of iodine and gold, and sodium chloride, with inhalations of chlorine gas. Concerning the eventual results in one hundred cases, he says:

"I have . . . found it very beneficial in the first stage, helpful in some cases during the second stage, but of only little value in the third stage, though occasionally even then some appear benefited by it."

The second section, on diseases of the throat, has been entirely rewritten, and comprises fourteen chapters. Running through the various diseases mentioned under this heading we note an appreciation of all done by modern bacteriology to determine the cause of diphtheria, but some points the author seems to regard as still undecided. "The necessity," he says, "for assuming that there are two forms of diphtheria, one produced by the Klebs-Loeffler bacillus, the other by other bacteria, seems to justify the statement that the identity of the specific micro organism believed to be the cause of the disease is as yet uncertain."

The chapters on tubercular syphilis and lupus of the larynx is concise, and yet comprise all we definitely know about these diseases, so far as concerns their practical management. Tuberculin is condemned in the first of these conditions as being of no more use than other remedies, and as liable to be followed by disastrous consequences.

The third section, comprising seven chapters, relates to diseases of the nose, and has also been entirely rewritten. The great advances in our knowledge of nasal physiology necessitate frequent re-writing of our literature on this point. Appended to the volume is a formulary of nearly two hundred prescriptions which the author regards as useful.

The general style of the book is concise, yet complete. It is not confined within such narrow limits as are many treatises on the topics concerning which it is written. The volume is one of value alike to the special and general worker, and we congratulate Dr. Ingalls upon the successful accomplishment of a confessedly difficult work.

MONA MACLEAN, MEDICAL STUDENT. A Novel. By GRAHAM TRAVERS. In three volumes. Edinburgh and London: William Blackwood & Sons. 1892.

A CHARMING love story very well told. When one picks up such a book as "Dr. Zay," "Helen Brent, M.D.," or "Mona Maclean, Medical Student," there is an expectation that the author will be found to be a woman, and that the heroine exemplifies, in one way or another, woman's superiority in the field of medical science. This expectation is not always found to conform to the facts as they exist, and such is here the case. The only theory that appears to be put forward in the course of this pleasing tale is the very modest one that a young lady may pass through the trials incidental to medical student life without losing her womanliness. Were the print not so large and the paper so thick the three volumes might readily be made one, not larger than an ordinary novel of the day, and why it has been necessary to make three volumes of it is not clear.

A MANUAL OF BACTERIOLOGY. By DR. GEORGE M. STERNBERG, Deputy Surgeon-General of the United States Army. Illustrated by Heliotype and Chromo-lithograph Plates, and 268 Engravings. New York: William Wood & Co. 1892.

THIS is the most extensive work on bacteriology that has yet appeared in the English language. Its author, Dr. Sternberg, has been identified with bacteriological work for many years, and was one of the first original investigators in this country. In 1880 he published a translation of Magnin's work on bacteria, and in 1884 a second edition of this work appeared, in which was included, with the work of Dr. Magnin, large additions by Dr. Sternberg. The present work is an entirely new one, is a large volume of about 900 pages, and it treats in considerable detail all of the many aspects of the bacteriology of the present day.

In Part I. there are chapters taking up the history of bacteriology, the classification and morphology of the bacteria and general bacteriological technology, including chapters on experimentation on animals and micro-photography.

Part II. contains chapters devoted to the consideration of the general biology of micro-organisms, including antiseptics and disinfectants of various kinds, with directions for the practical application of methods of disinfection; and also chapters on the ptomaïnes and toxalbumins, the products of vital activity of micro-organisms, the influence of blood-serum and other organic liquids on micro-organisms, etc.

Part III. is devoted to a consideration of all of the questions connected with pathogenic bacteria. There are chapters on the modes of action of pathogenic bacteria, channels of infection, and susceptibility and immunity; then a number of chapters treating very fully of the pathogenic bacteria, and their biological characteristics and culture reactions, and finally one on classification.

Part IV. is devoted to the consideration of saprophytic bacteria. In this are included chapters on the bacteria in the air, water, and soil, on the surface of the body and exposed mucous membranes, in the stomach and intestines, in cadavers and putrefying organic matter, in articles of food, etc. There are special chapters on non-pathogenic micrococci, bacilli, spirilla, etc., and finally two chapters, one on the species of bacteria not as yet classified and one on bacteriological diagnosis.

A very complete bibliography follows, which includes a list of all the important articles and works on the subject from the very earliest times. It includes references to nearly 2,600 articles and works and covers over one hundred pages of matter. The index is quite full and apparently satisfactory.

There are a considerable number of colored lithographic plates, most of which are good, and the volume is profusely illustrated with engravings, many of which are colored.

The book contains a description of a far greater number of micro-organisms than any work that has yet been published on the subject, and includes a consideration of practically all the pathogenic and non-pathogenic micro-organisms that have been described with sufficient detail to make their identification possible. The description of the less important micro-organisms has been put in small type.

The chapter on bacteriological diagnosis contains a classified list of about five hundred species of micro-organisms. These are arranged with regard to their morphological and biological characteristics, so as to render identification of unknown species as easy as possible.

The book represents the expenditure of an enormous amount of time and labor, shows great care in its preparation and a wide knowledge of the literature. It will prove to be extremely useful to all persons who are interested in the subject of bacteriology. The practical bacteriologist will find it valuable as a book for constant reference, and the general practitioner will find in it a work which includes an outline at least of most that is known about micro-organisms. The bibliography will also be of great value, as it is by far the fullest that has been published.

We congratulate Dr. Sternberg on the completion of so important a work, representing the result of several years of conscientious work, and destined, we believe, to be of great value to the profession.

The Geographical Distribution of Disease in Great Britain. By Alfred Haviland, M.R.C. S. Eng., etc. Second edition. Part I., 8vo, pp. 406. London: Swan, Sonnenschein & Co. 1892.

The study of disease in its relation to soil, although by no means new, is always invested with interest for the medical scholar. Mr. Haviland has already done such remarkably good work in this field that his second edition will be received with becoming favor. His interesting, not to say curious, investigations, upon which his previous work was founded, have, strangely enough, been strengthened by increased periods of observation, so that many of his conclusions appear almost as absolute as rules. It has been common to associate climate with many prevalent diseases, losing sight of the essential influence of soil formation and physical configuration of surface as important accessories. The author has studied the latter with painstaking enthusiasm and presents us with a work remarkably full of suggestive and well-attested facts. In fact, there is hardly a page which does not furnish suggestions to the student who may desire to master on an expansive scale the general law of disease.

The present volume deals more particularly with phthisis, cancer, rheumatism, and its attendant heart disease. The author has developed the following curious facts as the result of data collected for a score of years: 1, That cancer is more fatal among women in clayey flooded areas than on elevated calcareous soils; 2, that heart disease and rheumatism are more fatal in the unventilated valley system of England and Wales than in the open areas freely exposed to the prevailing winds and sunshine; and 3, that those tainted with phthisis succumbed readily to the full blast of prevailing winds.

We have been greatly interested in the details of the book, and commend it to every one who may wish to study on a large scale the influences of environment in its widest sense upon the production and progress of the diseases in question.

Human Embryology. By Charles Sedgwick Minot, Professor of Histology and Human Embryology, Harvard Medical School, Boston. Four Hundred and Sixty-three Illustrations. Pp. xxiii., 815. New York: William Wood & Company. 1892.

It is practically impossible for any but a special student of embryology to do justice to this monument of industry. But even the general medical reader, who has only a superficial knowledge of the subject, can appreciate the years of steady, patient work that have been required to collect and digest the material necessary to complete such an exhaustive treatise. The mere verification of the bibliographical references alone must have required months of research. The modest preface in itself is characteristic of the true scientist—the first to depreciate his own work, the last to recognize his own solid merits.

We cannot enter into such a detailed review of the work as it deserves, but can merely indicate its scope and general character. An introductory chapter on the anatomy and physiology of the gravid uterus is followed by Part I. on "The Genital Products," which includes a chapter on the spermatozoa and ova, impregnation, and a discussion of the theory of sex and heredity. The author's views with regard to the latter interesting subject are thus summarized on page 90: "The child is like the parents because its organization is regulated by not merely similar, but by some of the same, chromatin (nuclear substance) as that of the parents." Part II., on "The Germ-layers," includes Chapters IV. to VII., on "Segmentation," "Concrescence," and "The Mesoderm and Cœlom." Part III. (six chapters) deals with the embryo; Part IV. (four chapters) with the fœtal appendages, while Part V. is in effect a complete monograph on the fœtus, containing twelve chapters covering over three hundred pages.

In a work of such a purely scientific character one does not usually consider the author's style, yet we cannot refrain from calling attention to its conciseness and lucidity—qualities that are seldom united. Considering the abstruse theme which he has to treat, we congratulate Professor Minot most heartily upon the clear and interesting manner in which he discusses subjects that are perhaps the most difficult of comprehension to the general reader of any in the whole range of natural science. Of the numerous original illustrations we cannot speak in too warm terms of praise. They were evidently a labor of love. The evidences of minute and conscientious work displayed in every one of the microscopical sections can only be properly appreciated by one accustomed to making such drawings. We are glad to see that the publishers have made an unusual effort to do justice to the originals. The typography and binding of the volume are excellent.

Such a book as this, which is to be regarded as a pure tribute to science, free from any suspicion of personal aggrandizement on the part of the author, reflects credit not alone upon himself and upon the great university in whose faculty he holds an honored place, but upon American scientists in general. We cannot add to the inward approbation which accompanies the consciousness of work well done.

Guide Pratique pour le Traitement des Maladies de l'Oreille. Par le Dr. J. Baratoux. Pp. 136. Paris. 1892.

This little work on the treatment of maladies of the ear is intended for the laity, and describes most of the procedures resorted to by aurists, with numerous illustrations.

Materia Medica and Therapeutics. A Manual for Students and Practitioners. By L. F. Warner, M.D., Attending Physician, St. Bartholomew's Dispensary. New York. Philadelphia: Lea Brothers & Co.

This is one of the "Student's Quiz Series" and is fully up to the average of its class. Books of this kind are useful in reviewing a subject and in the "cramming" which is unfortunately often necessary under the present system of competitive examinations, but it is seldom that they will prove of any particular service to the practitioner, who has, or should have, other more authoritative works of reference. The present book seems to be fairly well arranged, the questions are judiciously selected, and the answers are given briefly but clearly.

The Use of the Galvanic Current for the Examination of the Urine Sputum.—Two Vienna physicians have recently used the galvanic current instead of the centrifuges now so much in use for producing deposition. The method is based on the same principle as that devised by Webster for the electrical treatment of sewage. By the electrolytic action of weak galvanic currents the gas-bubbles formed in the liquid carry with them the formed elements—cells, bacteria, even crystals—to the surface, whence they may be easily removed for microscopic examination, etc.

Society Reports.

THE NEW YORK PATHOLOGICAL SOCIETY

Stated Meeting, December 14, 1892.

H. P. Loomis, M.D., President, in the Chair.

Dr. Francis Delafield discussed some of the forms of pneumonia, and illustrated his remarks by many fine photo-micrographs and slides projected on a screen by means of a lantern.

At the close of this demonstration the Society gave Dr. Delafield a vote of thanks for this interesting and instructive exhibition.

Encysted Ovum, with Calcareous Degeneration of the Chorionic Villi.—Dr. George C. Freeborn presented "a card specimen," consisting of a uterus with attached fibroids, and a large cyst, together with the calcareous matter found in this cyst. The patient was a colored woman, who, twenty years ago, made an ineffectual effort to produce an abortion. Her abdomen gradually enlarged up to five years ago, when there was a sudden discharge of what she described as "small pieces of bone" and pus. The ovum was probably killed at the time of the attempted abortion, and became encysted. After decalcification, the microscope showed that these calcareous pieces which were discharged were nothing more than calcified chorionic villi.

Caries of the Vertebræ and Compression of the Spinal Cord.—Dr. E. D. Fisher presented a specimen of caries of the last dorsal vertebra, removed from a patient who had paralysis of the lower extremities and more or less interference with sensation. An operation for the relief of the pressure symptoms had been attempted a few weeks before his death, which occurred from exhaustion. His object in showing the specimen was to call attention to the fact that the bone did not make pressure on the cord, but that an inflammatory exudate had formed outside of the dura mater, giving rise to a pachymeningitis, and to narrowing of the cord at this point. This is the origin of the pressure in most of these cases, and, on this account, it is not probable that operation can hold out much prospect of benefit. In the specimen presented there was a softening of the cord at the point of pressure, which was probably due to secondary degeneration, as no other spots of softening were found in the cord.

Filaria Sanguinis Hominis.—Dr. E. Le Fevre presented a series of specimens of chylous urine, showing the changes in its appearance during the twenty-four hours. He also exhibited the patient, a man, twenty-two years of age, a native of British Guiana, who came to this city four years ago. He presented no symptoms of this condition until last July, when he noticed a change in the appearance of the urine, and about the same time began to suffer from headache. There were no other subjective symptoms. Preceding the appearance of the chylous urine there was a gradual enlargement of the scrotum. This swelling is apparently not a hydrocele; it is possibly the beginning of an elephantiasis from the stopping up of the lymph-channels. At the last meeting of the Society he had exhibited some of the urine, and also the filaria, but since then he had been unable to find the latter. The patient had been under treatment until recently at the Roosevelt Hospital with picrate of ammonia, and it was possible that he was just beginning to exhibit the good effects of this treatment.

Purulent Otitis Media, with Cerebral Symptoms.—Dr. Eugene Hodenpyl presented specimens from a man, fifty-five years of age, who had had a purulent otitis media on the right side for many years, but which stopped discharging about two weeks ago. He then began to suffer from fulness in the head, vertigo, and vomiting, and on December 3d he became delirious and blind. Since then there had been rapidly increasing paresis and numbness of the legs. Family and personal history good. On admission to the hospital, pulse 100, and regular, arteries thickened, respirations 20, temperature 99.4° F.; memory faulty, does not know where he is. There was no knee-jerk present, but paresis of both legs and arms, and considerable ataxia. Physical examination was negative. His urine had a specific gravity of 1.024, was acid in reaction, and contained a faint trace of albumin; microscopical examination was negative. On December 13th it was noted that he was a little more rational; the right limb was strongly adducted in tonic spasm, the left forefingers strongly extended, and the whole body in marked opisthotonos. At this time his sight had returned, the pupils were equal, and he continually beat the right arm spasmodically against the bed.

With such a history one would expect to find either a purulent meningitis or an abscess of the brain; but the gross appearance of the meninges is normal. A microscopical examination has not yet been made; it is possibly a cellular meningitis. On the surface of the liver are a number of deep furrows, with firm adhesions to the under surface of the diaphragm. Glisson's capsule is very much thickened about these furrows, and fibrous tissue extends down into the organ to a considerable depth. The middle and lower lobes of the right lung contain patches of fibrous tissue, which in view of the condition of the liver are quite probably areas of syphilitic interstitial pneumonia.

Dr. E. D. Fisher said that he had seen recently a case of otitis in which there were cerebral symptoms, especially paralysis, but further examination showed the case to be one of alcoholic multiple neuritis, a condition in which mental disturbance is not infrequent.

Dr. Hodenpyl remarked that his patient gave only a moderate alcoholic history.

Puerperal Septicæmia.—Dr. Hodenpyl also presented specimens from a case of septicæmia. The patient was delivered seven days ago. At the autopsy the abdominal and pleural cavities contained considerable clear serum, and the lower lobes of the lungs were so compressed as to contain scarcely any air. One kidney presented the appearance of a large white variety, and the other, the atrophied form. The uterus was three inches in depth, and contained a large quantity of material resembling retained placenta, but the walls of the uterus appeared to be perfectly normal. A bacteriological examination was being made.

Tuberculosis of the Genito-Urinary Tract.—Dr. D. H. McAlpin presented specimens of tuberculosis of the genito-urinary tract. The patient was admitted to the hospital, one year ago, suffering from tubercular laryngitis, and there were also numerous areas of tubercular consolidation in the lungs. Eight months ago there was some swelling in the testicle, attended with pain, but these symptoms subsided. At the autopsy the lungs were found to be filled with small tubercles; in the pelvis of the left kidney was a large cheesy mass from which tubercles radiated; in the ureter there was a small ulceration; in the bladder, near the trigone, were numerous foci of inflammation, and the testicle was studded with tubercles and contained a large cheesy mass.

Cultures of Tubercle Bacilli.—Dr. J. M. Byron presented three tubes containing cultures of the tubercle bacillus: one contained the bacilli from human sputum, a second contained bacilli from birds, and the third, an old culture obtained from guinea-pigs by inoculating them with the sputum from human beings. The culture in the first tube consisted of dry, granular heaps on the surface of the agar agar; that in the second, of a slimy layer on top of the culture medium; and the third, a thick, creamy layer, in which the cultures had become confluent and had covered the entire surface of the agar-agar. There is a great difference in the rapidity of the growth of these different varieties of tuberculosis; thus, if the culture from the human subject take two weeks to grow, that from birds would take three or four weeks, while the culture from the guinea-pig would only take one week.

Ulcer of the Stomach, with Perforation—Cirrhosis of the Pancreas.—Dr. H. S. Stearns presented a specimen which explained the rather sudden death of a woman, sixty five years of age, who for several years past had complained of wandering pains over the abdomen. She was transferred to the gynecological ward for examination, and on the two evenings following the examination had severe hæmatemesis. At the autopsy a large ulcer, with overhanging edges, was found at the cardiac end of the stomach. At this point there were many adhesions of the stomach to the spleen and liver, and between the adhesions to the liver and those to the spleen was a large cavity filled with clotted blood, and a perforation from this sac into the stomach. Examination showed very extensive cirrhosis of the pancreas.

A Gummy Tumor of the Cerebellum.—Dr Charles E. Bruce presented the brain from a man, twenty-eight years of age, who was admitted to the Almshouse Hospital on September 17, 1892, because of blindness. On the morning of the 21st he had a convulsive seizure, followed by right hemiplegia and coma, and he died on the following day. No history was obtained from him, but the nurse said that the patient had a slight staggering gait, with a tendency at times to fall toward the right, and that patient said he had had "fits" before, and that he had been thirteen weeks "going blind." It was noted in the hospital that the left pupil was contracted and the right dilated; that his respiration was stertorous, and the coma profound.

At the post-mortem examination the cerebral surface was found to be congested, and the sinuses engorged with blood. The dura was free, but the pia mater was adherent to the cortex, and there was a slight but very adhesive plastic exudation. The ventricles were dilated, and filled with blood-stained serum, and the brain tissues were quite soft. On the inner surface of the cerebellum, on the left side, near the pons, was a tumor, measuring 1¾ inch in diameter; it was bound down by recent lymph. Dr. Thacher had examined the specimen, and had pronounced the tumor a gumma. The interesting feature in the case was the absence of all symptoms of cerebral compression, except the convulsive seizure.

Rupture of the Liver—Fatal Hemorrhage.—The President said that rupture of some one of the abdominal viscera is a frequent result of severe injury. The solid organs suffer much more frequently because of their fixity, density, and close proximity to bony structures. Of the solid organs statistics show that the liver is most often injured, then the uterus, spleen, and kidney, in the order named. The stomach is least often injured, and but a few cases are on record. The liver suffers most often because of its position beneath the ribs, and against the spine, and because it is firmly held by strong ligaments and large vessels. In rupture of the liver the most convex part of the upper surface gives way first, generally in the right lobe. The specimen presented showed a rupture in this situation. On the surface of the organ was a fissure three and a half inches long and three quarters of an inch deep at its deepest portion. The laceration appeared to have occurred by a tearing or stretching of the tissues, and not to have resulted from a direct blow. The liver weighed four and three-quarter pounds, and was rather pale. Fluid blood was on the surface of the iver, and about a pint was found in the abdominal cavity. There was a slight hemorrhage in the peri-nephritic fat of the right kidney. With these exceptions all the abdominal organs were normal. The upper lobe of the right lung was firmly bound to the chest-wall by old pleuritic adhesions. In these adhesions were small hemorrhages of recent origin, presumably the result of the traumatism. No lesions of the thoracic viscera were found. The history of the case is as follows: A man, forty-two years of age, in perfect health, was crossing the street when he was knocked down by a beam projecting from a truck which was turning the corner. As the beam swung around it struck him on the right side. He died on the street before medical aid could reach him. No mark of the injury was seen on the surface of the body, there were no ecchymoses or contusions. This absence of external evidences of traumatism in rupture of the liver has been noted in a number of cases, and might account for the diagnosis of spontaneous rupture of the liver which has been made in a few cases, but which I believe never occurs. Another fact in rupture of the liver is, that the majority of cases are fatal.

Sudden Death from Perforation of the Lung in a Case of Acute Pulmonary Tuberculosis.—The President also presented specimens from such a case. The patient, J. E——, thirty-two years of age, died suddenly while sitting in a chair in one of the wards of Bellevue Hospital. He had just been admitted to the hospital, and no history of the case had been obtained. The autopsy, twenty-four hours after death, revealed the left pleural cavity filled with air, the lung compressed against the vertebral column, and at the apex bound down by old adhesions. No fluid was found in the pleural cavity. Both lungs were riddled with small cavities, varying in size from a pea to a small cherry. There was not a vestige of pulmonary tissue left in the right lung, and only the lower lobe of the left lung was in a condition to functionate properly. The upper lobe was completely filled with solid tubercular masses and with minute cavities.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, December 19, 1892.

Samuel B. W. McLeod, M.D., President, in the Chair.

Conservative Surgery of the Uterus and Appendages with Cases.—Dr. James A. Campbell read a paper bearing this title. According to his observation there was more uterine and tubal disease in this country than in Europe, a fact which he attributed to want of medical surveillance of houses of prostitution here. He had been able in the large majority of cases to trace the disease to infection from the male. He thought operations were more likely to prove successful at the patient's house than in a hospital, and the cases which he related were in home patients. He had had a few cases demonstrating the fact, he believed, that a cyst or solid tumor of the ovary could sometimes be removed, and yet leave sufficient healthy tissue to carry on the physiological function. Several of the cases were uterine fibroids, some having undergone cystic change, and were removed, without extirpating the uterus. A part of the cases were seen with Dr. Outerbridge. It was especially in uterine fibroids which had undergone cystic degeneration that the Apostoli method was dangerous. The author had had one case, while in Paris, in which death was hastened or caused by electricity, he having been unable to determine before its employment that the fibroid had undergone at one point cystic change. Electricity was applicable only in cases where the tumor was solid and intra-mural, not subperitoneal. In one of his cases of excision of a fibromyoma containing several cysts, the patient was believed afterward to have become pregnant.

Dr. Joseph E. Janvrin thought the paper set forth very well the practice in a certain class of cases in this country. He agreed with the author that the only cases in which electricity could be useful were those in which the tumor was a fibroid and intra-mural, not having undergone any cystic change. Other cases, if they required treatment, should be excised. A class of cases not referred to in the paper included those of extra-uterine pregnancy, meaning nearly always tubal pregnancy. Dr. Janvrin believed laparotomy was the proper remedy here, and that it was eminently proper to call such surgery conservative. He did not believe that a slightly congested tube or one the seat of simple catarrhal inflam-

mation, should be removed until other treatment had been long tried and failed.

Dr. Von Donhoff said that he had no criticisms to offer upon the paper. What had seemed strange to him was that the operations and diagnoses of others seemed always successful, while he with, it must be admitted, a fair amount of experience, sometimes made mistakes or had an unfortunate result. It had also seemed that a woman could never present herself with any kind of "bump," without some doctor feeling himself called upon to open her belly. Occasionally a grave mistake was made. A year ago he had had occasion to curette the uterus of a patient thoroughly. Some weeks afterward her abdomen began to enlarge rapidly. It was thought a tumor was developing which necessitated prompt interference. There was supposed to be no possible chance for pregnancy, for she had given birth to a child just a year before, had subsequently had severe purulent endometritis, for which he had curetted and swabbed out the cavity with iodine. He was assured by the patient and her husband that no sexual congress had taken place until after the commencing enlargement of the abdomen. It was believed by the speaker and others that there was an ovarian tumor or fibro-cyst. The patient was clamorous for an operation. On opening the abdomen the uterus and its appendages were found perfectly healthy, and there was intra-uterine pregnancy. Although every antiseptic precaution had been taken, the woman did not recover. He had learned not to look upon abdominal section so lightly as one might do on reading reports of brilliant successes.

Dr. F. C. Valentine thought there should be supervision over prostitution, and claimed that during a brief period when it existed in St. Louis, it had corrected much evil.

Dr. Campbell said, partly in reply to Dr. Von Donhoff's remarks, that the reason why his cases had proven so successful was that he had selected those which he thought most likely to recover, while the severer ones had been sent to hospitals for treatment by older surgeons of well-established reputation.

The Great Influence Exerted by the Size of the Dose in Changing Therapeutic Action.—Dr. A. M. Fernandez read the paper because he thought the subject had not received the attention which it deserved. It was barely mentioned in text books, and consequently was soon forgotten by the reader. At the remotest period in the history of medicine it had been known that certain remedies produced entirely different results when administered in large doses from what they produced when administered in small doses. This fact had been made by a certain sect the basis of a false train of reasoning, which, carried to its legitimate end, would lead to the conclusion that it was more potential to give none of a given medicine whatever. Among the medicines mentioned as acting differently according to the size of the dose were calomel, ipecac, antimony, sweet spirit of nitre, tincture of lobelia, rhubarb, chloride of sodium, digitalis, etc. According to the remedy and the size of the dose, we had here agents which might produce a sedative action on some portion of the alimentary tract, or cause vomiting or purgation; which might produce catharsis or diuresis; act as an alterative, an anthelmintic, or emetic; hasten or diminish cardiac action, etc. Again, it was necessary not only to consider the amount of the remedy in order to produce a certain effect, but also the modifying influence of climate from which the drug was obtained, the season of the year when gathered, and the part to be employed, whether roots, leaves, or flowers, and also the patient's peculiarities of constitution. There were medicinal plants which possessed similarity of structure, yet produced opposite physiological or remedial effects; while others which seemed to have no similarity of appearance produced like effects. Examples were given, and may be found briefly mentioned in works on therapeutics and dispensatories.

Dr. B. Thompson thought the difference in effect produced by a drug according to the size of the dose, would often account for the failure of others to obtain the results which had been claimed by the first observer. A striking illustration of the difference of dose required in different cases was seen in the use of iodide of potassium against syphilis and other diseases. In syphilis it was in one case run up to the enormous quantity of two hundred grains, three times a day, before controlling the epileptic convulsions. Personal idiosyncrasy was shown by one of his patients, who could take neither opium nor rhubarb. Some years ago he tried to treat some patients for tapeworm, and one of the men on whom he failed went to a "specialist in tapeworms," who succeeded in getting the head, while Dr. Thompson had been able to procure only a long portion of the body. The quack had used the same remedy, malefern, only administering it in a different manner, that is, in repeated doses of the ethereal extract.

Dr. F. C. Valentine expressed his appreciation of the value of the paper, and of the necessity for paying attention to the size of the dose according to the effect it was desired to produce. The German proverb, *Der das kleine nicht ehrt ist des grossen nicht werth*, was very appropriate for this occasion. He expressed regret for the time which he had some years ago wasted on homœopathy.

Dr. J. Hilgard Tyndale was guided by six rules in giving medicine: 1. The need of changing the form of the remedy from a fluid to a pill or powder, etc., according to the idiosyncrasy of the patient. 2. Employ various forms of the same remedy; for instance, never give one form of iron long, but change it every week or two. 3. Lengthen or shorten the number of times the remedy is given. 4. Change the remedy itself the moment the effect is not what has been expected, and try instead of digitalis, strophanthus, etc. 5. Run up and down the scale with the dosage, as in chorea; begin perhaps with five drops of Fowler's solution, increase to perhaps fifteen, and run gradually back to five. 6. Use the revolving plan, giving, for instance, ten drops of tincture of digitalis and one of strophanthus to-day, and diminishing the amount of digitalis one drop while increasing the strophanthus by one drop each day.

Dr. Bleyer spoke of the value in some cases of mild, small doses of electricity long continued, perhaps while the patient was asleep.

Dr. R. Farries spoke of the varying amount of the drug called for by different patients.

All officers were renominated except the vice-president, Dr. Benjamin F. Vosburgh being the nominee for this position.

The Diagnosis of Endometritis by the Hot Douche.—Dr. Purch observes that Trélat has summed up the essential clinical features of endometritis as blood, glairy mucus, and pain (*British Medical Journal*). When these three features are present together, inflammation of the uterine mucous membrane may safely be diagnosed. However, this is not always the case. The secretion itself is characteristic, yet the secretion is sometimes very scanty at any given moment. Schultze's method for diagnosis consists in leaving a tampon soaked in a tannin-glycerine solution (twenty to twenty-five per cent.) pressed against the uterus for twenty-four hours or longer. At the end of that time, if the uterus be healthy, a small clot of pure mucus will be found on the tampon. If unhealthy, the tampon will be covered with pus. Grynfeldt, of Montpellier, has for a long time employed a simpler method. When a jet of hot water is played against the cervix, it turns pale, owing to anæmia from contraction of the uterine muscular tissue. That contraction also expels from the cavity of the womb the pathological products of chronic endometritis, a muco-purulent secretion. It escapes freely when the douche is discontinued. This test is very easy and sure; it also serves to prove whether the case be really cured after treatment.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON GENERAL MEDICINE.

Stated Meeting. December 20, 1892.

A. A. SMITH, M.D., CHAIRMAN.

An Interesting Case of Arterio-renal Disease, with Remarks on Early Diagnosis, Pathology, and Treatment.—DR. R. VAN SANTVOORD read a paper on this subject. (See p. 36.)

DR. H. M. BIGGS said he wished to refer to only one or two phases of the important subject treated of in the paper. The first point was regarding the pathological anatomy of arterio-renal disease. He did not believe the changes which took place in the arteries were of an inflammatory nature, but thought that they were due to a degenerative process, and that the new-formation tissue found in such cases was secondary to this degeneration. This was certainly true of the kidneys, and was also probably the case, to some extent at least, in regard to the vessels. The arteries were affected first. These changes took place in the muscular and elastic elements in the walls, and resulted in a diminution of the lumen of the vessels. Eventually, changes took place in parenchymatous organs, as a consequence of this process.

An important point brought out in the paper was the latency of the renal disease which is apt to be met with. In making autopsies, he had been much struck with the frequency with which rather extensive disease of the kidneys is found in cases in which its presence was not discovered during life. One reason for this was, no doubt, the imperfect manner in which urinary examinations are apt to be made. In order to obtain any accurate results, it was essential that such examinations should be repeated over and over again. While at one time nothing might be found, at another there might be detected evidences of abnormal conditions. Often these evidences were very slight. There might, for instance, be only a very few hyaline casts, with perhaps one occasional granular cast, and these were thus liable to be overlooked.

The presence of albumin was significant, but its absence was not significant, as it afforded only negative evidence of the absence of renal disease. There was one cause of frequent mistakes. If the urine was never more than normal and was of high specific gravity, it was very apt to deceive the examiner. In some cases of kidney disease, however, these conditions might exist even for years. But in all cases of arterio-renal disease, as Dr. Van Santvoord had pointed out, there was present high arterial tension as an early sign. We had grown so accustomed to associate low specific gravity with albumin as an evidence of renal disease, that when these were not found we were apt to exclude the latter.

Another source of error was the character of the examinations frequently made. It was a common practice merely to examine one specimen of urine, taken, for instance, in the morning; and it was extremely difficult to induce either physicians or patients to furnish the urine for the whole twenty-four hours. For the determination of the quantity of urea excreted this was absolutely necessary. This was also highly desirable for other reasons, since at one time of the day the urine might contain casts and at another time not. One point, which was of great importance, that should lead to careful and repeated examinations of the urine, was the presence of high arterial tension.

DR. VAN SANTVOORD thought Dr. Biggs's remarks in regard to urinary examinations were of great practical value. In acute scarlatinal nephritis, for instance, a single small specimen usually sufficed; but in these chronic cases a single examination, especially if negative, proved nothing. It was very difficult, however, to get the patient to understand just what is meant by the urine of the whole twenty-four hours, including that passed while at stool. There could be no question that Dr. Biggs was right as to the character of the pathological changes in arterio-renal disease. He thought, however, that in addition to the chronic degenerative process there might be acute inflammatory attacks from time to time. The idea became more and more clear in his mind that Bright's disease is not a disease of the kidneys at all. The kidney was simply an "end organ," and any drug intended directly for the kidneys would not reach the existing disease. In order to do any good with our treatment it was necessary to get at the underlying condition. This was a very difficult matter with our present knowledge, but this plan would afford the most service to the patient.

The Chairman, DR. A. A. SMITH, said that anyone in active practice must have repeatedly met with these cases. He was particularly struck by Dr. Van Santvoord's last remarks. What had often been regarded as disease of the kidneys was in reality simply a local manifestation of an underlying condition. The same seemed to be true of almost any parenchymatous organ such as the kidney and liver. He quite agreed with the author of the paper in regard to the matter of therapeutics. He noticed that he carefully avoided any attempt to treat the kidneys, but directed his efforts toward the general condition existing. He laid great stress upon the difficulty of assimilation, and he himself had been led to believe that this arterio-renal disease is often primarily due to defective assimilation. He believed also that derangements of the nervous system bear an important part in its causation; and especially of the sympathetic nervous system, on account of its influence upon the blood-vessels. As to the importance of the most careful and repeated examinations of the urine, he was entirely in accord with both the previous speakers, and said he thought we were all no doubt too careless in this matter. He would like to ask Dr. Biggs whether he was of the opinion that the changes which are often found in the muscular walls of the heart in this affection were of a degenerative character, properly speaking?

DR. BIGGS said he thought not. The hypertrophy met with, he believed, was due to the overwork which the heart had to do. There was often present, however, interstitial myocarditis, which occurred as a later manifestation.

Presentation of a New Aspirator, with Demonstration of its Advantages, by Dr. W. S. Moore.—DR. MOORE stated that the aspirator which he wished to demonstrate to the Section worked on a new principle. The vacuum, instead of being formed by pumping, was produced by absorption of ammonia gas. In order to understand its action it was only necessary to remember that ammonia gas is only one-half as heavy as atmospheric air, and that water will absorb about one thousand times its volume of ammonia gas—that is, one drachm of water will absorb a gallon of ammonia gas. The aspirator consisted of a glass vacuum vessel with an opening at the bottom, which could be closed at will by means of a stop-cock. There was also an opening at the top of the vessel, which was closed by a stopper through which passed a metallic branching tube. Attached to one of the branches was a small retort, or flask, which was suspended over an alcohol lamp, the lamp being held in place by a metallic band passing around the vessel. Attached to the other branch of the tube was the rubber tubing, with bulb, at the end of which was the aspirating needle.

Having described the instrument, Dr. Moore showed the mode of operating it. He placed in the flask a small quantity of aqua ammoniæ, stating that about two drachms was as much as was necessary. As soon as heat was applied the gas immediately began to pass into the vacuum vessel. Being lighter than air, it remained at the top of the vessel, forcing the air out of the bottom opening. The instant that all the air had escaped, the operator was made aware of the fact by the odor of ammonia, which indicated that the vessel was now full of ammonia gas. The vessel was then sealed by turning

the stop-cock, and the next thing was to absorb the gas in it, this being done by introducing a minute quantity of water into the vessel by means of the rubber hand-bulb.

It was soon seen that the vessel had entirely filled itself. The air having been expelled, Dr. Moore explained that there was nothing in the vessel to resist the inflowing fluid except the ammonia gas, and since this gas is incapable of offering any resistance to the fluid, it necessarily followed that the suction-power was as great as possible. The good points of this instrument, he said, were: 1. It can be operated more quickly and easily than any other. 2. There are no valves to get out of order or pistons to get dry. 3. It is an aseptic instrument, as the ammonia gas acts as an antiseptic, and it has no crevices to prevent its being cleaned. 4. Its most important advantage is the perfectness of the vacuum, and, consequently, its superior suction-power. 5. Its cheapness.

In conclusion, he stated that with this apparatus a vacuum could be formed in a few seconds, if necessary, and the vacuum was as complete as could possibly be obtained. It was true that the suction was not stronger than in Dieulafoy's instrument, but the latter was much more expensive. The aspirator could be charged at one's office, so that when the bedside was reached there was nothing to do but to turn the stop-cock.

In reply to a question, Dr. Moore said that the cost of the apparatus complete, with needles, was about ten dollars. Having been asked whether there was not danger of corrosion of the metallic tubes, he said that if the tubes were nickel plated throughout, both inside and out, there would be no corrosion. But even without nickel-plating this was really no objection. It was only necessary to wash out the instrument promptly after using, as it was a fact that ammonia acts very slowly upon pure copper. The tubes in the instrument shown were nickel-plated only on the outside.

SECTION ON SURGERY.

Stated Meeting, December 12, 1892.

JOSEPH D. BRYANT, M.D., CHAIRMAN.

Five Herniæ in One Man.—DR. W. B. COLEY presented a man about forty-five years of age, who had already been subjected to four operations for the radical cure of herniæ, and was yet to undergo another for umbilical hernia. Dr. Abbe first operated upon him in 1890, by the Macewen method; there had been a recent recurrence. The next operation was done in September, 1890, by Dr. Kammerer, and there had yet been no return. The third operation was performed in November, 1891, by Dr. McBurney's method. The last operation had been done at the Roosevelt Hospital two months ago, for right femoral hernia, which had not yet recurred. The patient was now in the New York Hospital awaiting operation for umbilical hernia.

Partial Excision of the Urethra for Urinary Fistula.—DR. THOMAS H. MANLEY presented a man advanced in years, on whom he had performed partial urethrectomy for urethral fistula. As long ago as 1865 he had had a perineal abscess which terminated in a large fistula, and had since been treated by divulsion, internal and external urethrotomy on various occasions, but without success in closing the fistula. When he had entered the hospital his condition, both mentally and physically, was deplorable; there was extensive eczematous eruption around the fistula, catarrhal inflammation of the bladder, and partial dementia. Dr. Manley concluded to try a procedure which he had employed in a former instance, viz., to cut out the affected portion of the urethra and join the distal and proximal ends by suture. The operation proved a success; urinary incontinence had quite ceased, and the mind had undergone marked improvement. At present he passed a sound No. 10 English.

Epithelioma of the Ear Treated by Excision and Skin Grafting.—DR. WILLY MEYER presented a man thirty-two years of age, who had had an epithelioma involving the upper and fore part of the ear and neighboring scalp. The growth had started in a pimple four years before; it had been treated by a doctor with acids, which had caused an ulcer. Dr. Meyer excised the parts a distance of two inches in diameter, taking away the helix, part of the tragus, etc., and then applied Thiersch's skin graft. At present there was little difference in appearance between the two sides. Specimens, photographs, and patients were also presented in illustration of papers read later by Drs. Whitman and Coley.

Observations on Fractures of the Neck of the Femur in Childhood, with Especial Reference to Treatment and Differential Diagnosis from Separation of the Epiphysis.—DR. ROYAL WHITMAN read a paper with this title. The number of patients shown in illustration of fracture of the neck of the femur in childhood was five, all of whom had been brought to the Hospital for the Ruptured and Crippled with a different diagnosis, usually that of hip-joint disease. He had seen none of the cases during the earlier stage, or not until the fourth week to the sixth month. Most of the children had fallen a distance of fourteen feet or more. In all the cases there was perfect or nearly perfect motion of the limb. The degree of shortening was usually from three-fourths of an inch to one inch. There was in all an elevation of the trochanter which constituted a projection; in walking there was a dragging of the foot and eversion. The pain in most of the cases had disappeared. From the return of mobility in all directions, there could be no doubt but that the head of the femur rested in the acetabulum; there must have been a fracture between the head and the neck which changed the angle from an obtuse one to almost a right angle. It was this alteration which caused the projection of the trochanter and the immediate shortening of the limb. The shortening had increased subsequently.

Dr. Whitman said that this accident in childhood had been denied heretofore. He did not deny but what separation of the epiphysis might take place, but insisted that such was not the case in the patients presented, and expressed the belief that fracture was by far the more common accident. The treatment employed by Dr. Whitman consisted in obtaining immobility by the modified double Thomas splint.

DR. LEWIS A. SAYRE thought the author had pretty conclusively proven his position. In his own book he had spoken of the subject as fractures, diastasis which showed that he was somewhat in doubt whether fracture took place, or whether there was separation of the epiphysis. He remembered one case in which bony crepitus was elicited, and, therefore, there must have been fracture. Dr. Sayre presented a part of the pelvic bones of a child which had died of pneumonia several years after he had treated it for separation of the epiphysis, although the physician who brought the case to him had made a diagnosis of hip-joint disease. The end of the femur had risen above the normal acetabulum and formed a marked depression on the ilium, which was round and smooth, and constituted a perfect joint.

DR. STEPHEN SMITH admitted the evidence presented by Dr. Whitman as apparently conclusive, but referred to cases which showed that separation of the epiphysis did actually take place, in some instances at least. He had employed the Hamilton splint for obtaining fixation.

DR. V. P. GIBNEY did not doubt but what there were many cases like those related by Dr. Whitman, which passed as cases of hip-joint disease, and which might have been treated more promptly had their true nature been appreciated. He also believed that in the aged fracture of the neck of the femur should not be regarded as hopeless; that it could be treated successfully if the parts were replaced and absolute fixation were carried out; which could either be done by plaster or suitable splint.

The latter remark of Dr. Gibney's was emphasized by Drs. Judson and Reginald H. Sayre.

Treatment of Malignant Tumors by Repeated Inoculations of Erysipelas, with a Report of Ten Cases.—Dr. W. B. Coley read a paper and presented photographs and patients in illustration. In September, 1891, he published an article in the *Annals of Surgery* on the treatment of sarcoma by erysipelas inoculations, and reported three cases. He had been stimulated to try the method by a case which had occurred in the New York Hospital, on which several operations had been performed by Dr. Bull, always, however, with recurrence or extension, until accidentally the wound became inoculated with erysipelas, after which it healed, and there had since been no return, although about seven years had elapsed. The cure could not be attributed to anything else but the attack of erysipelas. Before trying this method the question arose, how could artificial erysipelas be best produced, and what were its dangers and limitations? He had convinced himself that the mortality from uncomplicated erysipelas was small. The first case on which he had an opportunity to try artificial erysipelas was one of sarcoma of the neck, which had been operated upon by Dr. Bull, without, however, being able to remove the entire disease. It almost completely blocked the pharynx, so that the food would regurgitate through the nose. He injected small quantities of erysipelas bouillon cultures into the wound; slight local and constitutional reaction followed, and the tumor of the neck perceptibly diminished in size; the patient's general condition improved. Within a few months, however, the tumor had about reached its original size and another trial was made, a fresh culture being injected into the tumor this time. An active erysipelatous eruption and constitutional phenomena then presented themselves, the eruption passing over the head and face and across the median line. The tumor in the neck began to break down in two days and discharged until the end of the attack, and by the end of two weeks had almost entirely disappeared. The appetite improved, and there was rapid gain in flesh and strength. The local trouble was no longer of significance, and up to the present time there had been no return. The patient, however, was addicted to the morphine habit, which he still continued. In the next case he was unable to get the inoculations to take, because probably the cultures were too attenuated. The same was true of the next case, and surrounding the patient with others in the ward who had erysipelas failed to cause the disease. Both of these were cases of bone erysipelas. The next was one of sarcoma of the back and groin. After several attempts at inoculation he finally succeeded in inducing an attack, and the tumor shrunk, became pale, and disappeared at the end of three weeks, leaving scarcely any induration; the patient gained seven pounds in twelve days. After several months there was recurrence, and in July last he succeeded, after several attempts, in again inducing a typical attack of erysipelas, and again the tumors disappeared. There was now another recurrence. The seventh case was one of carcinoma of the breast, the tumor having first been discovered five years ago. Two attacks of erysipelas were induced at different periods, each time with a breaking down of the tumor. There was now another recurrence, and it was proposed to repeat the inoculation. The patient's condition was still good. The eighth case was also one of carcinoma of the breast, on which four operations had been performed. The inoculations were made in August last, with temporary benefit, but there had since been increase in the size of the tumor. The ninth and tenth cases were likewise carcinoma, one affecting the cervical glands, the other the inguinal glands. They had improved.

With his own cases, the total number found by the author in which erysipelas had become either accidentally or intentionally grafted upon malignant tumors, was thirty-eight, seventeen of which were known to have been carcinoma and seventeen sarcoma. The immediate result in seventeen cases of carcinoma was a permanent cure of three; ten showed temporary improvement; and one died as a result of the erysipelas on the fourth day. Of the seventeen cases of sarcoma, seven were well at periods from one to six years after the attack of erysipelas; eleven showed more or less marked improvement; one of the accidental cases died.

The author thought the cure had been effected by an antagonistic bacterial action. According to recent experiments it would seem it might be not only local in its action, but sometimes constitutional, causing disappearance of tumors at a distance from the inoculations.

The Chairman read a letter from Dr. T. M. T. Finny, of Baltimore, which stated that his experiments had been limited to three cases. The first was one of epithelioma of the face about the size of a silver dollar, which disappeared after a spontaneous attack of erysipelas, and had not returned during two years. The second case was one of double carcinoma of the breast with extensive glandular involvement and internal metastasis. She had been operated upon twice before she came under his observation. The improvement was marked after the inoculation of the erysipelas, but her condition was too far advanced to obviate death by exhaustion. In the third case he was unable to induce erysipelas.

Dr. William T. Bull said he had been familiar with the author's work, which had been carried on with great enthusiasm and loss of time. He had himself taken the responsibility of advising this course of treatment in many of the cases, and he was glad to be able to confirm every detail as to marked improvement or cure narrated in the paper. The one of sarcoma of the neck was an exceedingly interesting one; it was something rare for a surgeon to see a patient living nine months after the tumor had reached the stage at which it could not be removed by the knife. While his enthusiasm was great, it must be admitted that the method of treatment was far from perfect. There was reason to hope improvements would be made. It should be remembered that the method had been applied very indiscriminately, mostly in helpless cases, and the success had been very considerable. He thought it would be well to use the method as an adjunct to surgical procedure, and not depend upon it exclusively.

Dr. E. Elliot, Jr., spoke of a case of carcinoma of the breast which the patient would not have operated on until it had far advanced. After the operation she continued to get worse until an accidental attack of erysipelas, when some of the tumors disappeared and her condition greatly improved. This continued for about ten weeks, when there was recurrence. He then tried inoculations of erysipelas, but failed to induce the disease, and she died.

Dr. Daniel Lewis thought erysipelas acted probably by its irritative and locally destructive effects, the same as certain caustics, like Marsden's paste, whose use he approved of in certain instances. While he hoped the treatment by inoculations with erysipelas would succeed, still he believed its efficacy should be proven in a much larger number of cases before it was widely advertised among the public. It was not desirable to have another tuberculin fiasco.

Dr. Van Arsdale saw a patient inoculated twice with erysipelas by the scarification method, for malignant disease, in Thiersch's clinic in 1883, and while in both instances an attack was produced, it had no influence upon the disease, and the patient died.

Dr. John A. Wyeth said he was not willing to assert that the specific germ of erysipelas had no especial action upon malignant tumors, but it must be remembered, however, that other forms of inflammatory action would sometimes effect a cure. An instance of this sort had come under his observation. Owing to the great size of the sarcoma in the abdominal walls, it could not be removed entirely, and therefore he resorted to the use of arsenious acid injected directly into and around the mass. Complete cure was thus effected, as the patient had been

well for seven years. The microscopic examination by several pathologists showed undoubted sarcoma.

Dr. Coley strongly resented the suggestion of Dr. Lewis, that the disappearance of malignant tumors after inoculations of erysipelas was simply due to inflammatory reaction. In one of Dr. Bull's cases, for instance, there was also a malignant tumor in the vagina, which disappeared after the erysipelas attack, located at a distance. Seeing there had been seventeen cases of inoperable sarcoma, with seven cures after erysipelas, he thought the sooner the public knew of the method the better.

Correspondence.

MISINTERPRETATION OF MISOGYNISM.

To the Editor of the Medical Record.

Sir: In the Medical Record of December 31st, under an editorial headed "Should Doctors Marry?" you state there is an agitation in North Carolina on this subject, excited, it would seem, by the writings of a certain "misogynic gentleman, Dr. Oscar McMullan," who "thinks they should not."

Now, I claim that by no possible perversion of any utterance or writing of mine could such a sentiment be attributed to me, and the inevitable conclusion to which I am driven is, either that you have never read the original article from which you quoted, or, being under the influence of the festive holidays, you were guided by that condition of mental diplopia which enabled you to see between the lines a meaning which my written words did not convey; or else you were unkindly willing to make me the scapegoat of your own "misogynism," which, being encircled, perhaps, by a too exacting and dominating domestic influence, you did not dare to utter in *personâ propriâ*.

The clear meaning of the writing in question was, that a young doctor or student of medicine should not allow himself to become entangled in that love for woman which would necessitate matrimonial alliance before thorough preparation had been made for life's important work. "When you are ready for a wife," my distinct exhortation was, "select with your maturer judgment a suitable helpmeet, and she will crown your life with choicest blessings."

In all candor I think I am entitled to make this disclaimer against sentiments so unwarrantably thrust upon me—sentiments so ungallant, so foreign to every instinct of my nature, and so completely refuted by the practical outcome of my whole life.

Very respectfully,
Oscar McMullan, M.D.

Elizabeth City, N. C., January 5, 1893.

[We are more than pleased with this explanation and gladly place Dr. McMullan right on the record. Ed.]

SOME CORRECTIONS OF ADDRESS ON SURGERY.

To the Editor of the Medical Record.

Sir: In an address delivered before the State Medical Association of New York, by Dr. Frederic S. Dennis, on the "Achievements of American Surgery," and published in your journal of December 3, 1892, page 642, speaking of the surgery of the vascular system, he uses the following language: "The subclavian artery in its first portion was ligated for the first time by J. Kearney Rodgers, in 1845. The case died, and the vessel has never been tied successfully until 1892, when it was tied by Halsted, of Baltimore." This was a rather surprising mistake to make, since Dr. Dennis had all the periodicals in New York at his command, and had he consulted the October number of the *American Journal of the Medical Sciences* for 1883, he might have seen Dr. Middleton Michel's long history of the successful ligation of that artery between the scaleni, the ligature applied just at the tubercle of Chassaignac on the first rib; and as far as the difficulty of the operation—virtually in the first part of its course; and all of this was done thirty years before Halsted's operation. This was such a memorable event in the wide field of surgery, during our recent war, that it concentrated attention upon South Carolina when her distinguished surgeon, Middleton Michel, of Charleston, tied that important artery, buried beneath the collar-bone, very near the heart, and the man's life saved. Now years have rolled on without knowledge of what had become of this soldier, whether he was even alive, when a Columbia, S. C., paper recorded an unexpected episode, which occurred at a meeting of Confederate Surgeons, assembled at the capital in November, 1888, which occasioned the most enthusiastic greeting of surgeon and patient after the lapse of twenty five years. Dr. Leaphart brought this patient to meet his old surgeon, and this extraordinary case of surgery was exhibited in its successful results to an admiring assembly of veterans of the old army.

Another mistake which it might be well to call attention to in this connection is this: In attributing to "Kinloch, of South Carolina," his first operation of excision of intestine, with suturing of the divided ends, with a view to establishing the continuity of the canal, in 1863. In reality, this operation was first performed by Dr. F. McFadden Gaston, of South Carolina, now of Atlanta, Ga., being twenty years in advance of anyone else. He is given full credit by physicians in general for this pioneer work.

L. C. Stephens, M.D.

Blackville, S. C., December 17, 1892.

THE COTTAGE OR GENERAL HOSPITAL PLAN FOR THE INSANE.

To the Editor of the Medical Record.

Sir: In the Medical Record of December 24, 1892, in an editorial entitled "A Modern Asylum Superintendent's View of the Care of the Insane" you allude to the new Asylum building for Bloomingdale, and intimate that it will probably be the last of the old style insane asylums.

The contest between the friends of the cottage or colony plan, and that of the connected hospital plan, has been waged for the last twenty-five years at least, and the advocates of numerous separate and distinct buildings, somewhat like a village, for the care of the insane, have as yet secured but two or three such establishments, out of a hundred or more institutions in this country, and they have been no more successful abroad. The fact that Gheel, Belgium, is a village, and provides for a large number of insane people, seems to be the argument which induces many people to feel that such an arrangement must be an ideal one. Practically, the Gheel system is only a part of the state system of Belgium, and never provides for more than twenty per cent. of the insane of that country, and this twenty per cent. is a class of carefully selected chronic and harmless cases, who, before they are distributed through the numerous small houses of the place, undergo a period of probation in a systematic hospital, small in size, and far from *open* in administration; and those patients, who are for any reason subjects of suspicion, are relegated to the other eighty per cent. of the insane of the country, who are confined in hospitals of the closest type. I say this from actual examination and not from hearsay.

The cottage, or colony hospital, so called, has a distinct central department, which varies in size, and is used for the active treatment of the insane, and it has numerous other buildings detached from each other, in which patients are domiciled rather closely, and are no doubt quite cheaply maintained. There can be very little of the family, or home, or domestic element, in a provision

for from twenty-five to fifty people in a two-story building, the upper part of which is devoted to sleeping in one large dormitory, and the lower part to day rooms; and the best claim that can be made for the colony system is, that it furnishes a *cheap* system, capable of indefinite expansion, for providing for the dependent insane.

The Kirkbride plan of insane asylums has hardly been used for the last thirty years, and the modern hospitals for the insane, such as the new institution at White Plains, for Bloomingdale, the new State Institution at Ogdensburg, and the new criminal institution at Matteawan, are what are known as the Pavilion type, in which numerous buildings, entirely distinct from each other, except as they are connected by narrow corridors, constitute the group, and I believe the great majority of those practically familiar with the subject believe that this arrangement secures most of the advantages of separate cottages, without losing the advantage of free communication between all parts of the institution, in all states of the weather, day or night.

Human nature is weak, and no amount of good resolution or discipline will, in my opinion, make the supervision of a great number of detached buildings as perfect as the supervision will be if these pavilions are connected together. The occupants of such detached houses must be more or less left to their own devices.

The grouping of a few specialized cottages about the main institution, is recognized by all superintendents as an excellent means of meeting certain conditions, and is a part of every such institution, either realized or under contemplation.

Please pardon this communication, which is actuated by belief that the actual status of the provision for the insane throughout the country is not as well understood, perhaps, outside of the specialty, as it might be.

I am, yours very truly,

SAMUEL B. LYON, M.D.

BLOOMINGDALE ASYLUM, N. Y., January 7, 1893.

New Instruments.

A NEW DISPERSION-ELECTRODE FOR THE ADMINISTRATION OF GALVANISM IN GYNECOLOGY.

BY EDWARD SANDERS, M.D.,

NEW YORK.

ATTENDING GYNECOLOGIST TO MT. SINAI HOSPITAL, OUT-DOOR DEPARTMENT.

A PERMANENT dispersion, electrode for the administration of high-current strengths in gynecological electro-therapeutics, is a desideratum "devoutly to be wished for." At present we have at our command a considerable number of such external electrodes, against each of which, however, some valid objection may be urged. The simplest, the broad, flat sponge, which is but little used, is, as has been well said, "filthy and current-absorbing." Those made of absorbent cotton placed over wire-gauze, are equally objectionable. The water electrode of Martin is good in some respects, but the fact that the covering membrane is liable to become dry and brittle when not in use, while, in addition, the tendency of holes to appear therein, thereby subjecting us to the painful risk of drenching our patient, make it an unreliable and unpleasant one to resort to. Englemann's punk-electrode has been found sadly lacking in durability, the softened punk with each soaking running more and more away, the sheet of punk becoming gradually smaller and thinner. So far, the best abdominal electrode presented to the profession has been the well-known one of Apostoli. This has been modified by Goelet into a permanent one. The original is extremely nasty and inconvenient, troublesome to prepare, and difficult to keep always ready for immediate use, especially in private practice; while its weight and coldness make it additionally unpleasant when applied to the abdominal surface. True, the coldness may be overcome, but the other objections remain unavoidable. The modified Apostoli is not so nasty, but there is great difficulty in keeping it sufficiently soft. Minus the nastiness, it is not the equal of the original form. Such being the state of affairs, a reliable substitute, one that is always at hand, especially in the office, is greatly to be desired, and as such a one I would recommend an electrode made of felt. This felt electrode, which has been used considerably of late in my practice, and that with great satisfaction, is extremely simple in construction, and can therefore be made by anyone of ordinary mechanical skill; besides, its durability and reliability make it a very desirable addition to our electrical outfit. Its phability makes it easily adaptable to all irregularities of the abdominal surface. It consists first of a thin sheet of lead, or better, of soft block tin, to which a binding post is welded at an acute angle. This tin or lead sheet had best be perforated by a number of small holes of about one-fourth inch in diameter, gouged out at regular intervals. The size of the plate will of course vary, the most convenient for our purposes being 6 by 8 inches and 8 by 10 inches, thus giving us two electrodes sufficiently large for all purposes. Next the felt is to be loosely quilted to the tin or lead sheet. The kind of felt is extremely important. It should be of loose texture and able to take up and hold considerable water, and not too resistent to the passage of the current. So far the best has been found to be the ordinary hair felt used by plumbers to cover in steam pipes, which, besides being very loosely felted and soft, is very cheap. One or two thicknesses of this are quilted to the tin or leaden plate, care being taken (and this should be borne well in mind) to bring it around the edges of the metal, so as to completely cover them in; for otherwise the current will be given off too freely at any uncovered joints and unnecessary pain inflicted, thus interfering greatly with the usefulness of this electrode. Next we cover over the felt by a layer of stout twilled muslin, or crash towelling, the back of the metal plate being covered in by a piece of rubber cloth, having a small hole allowing the binding post to pass through. Last of all, over the muslin or towelling place a stout piece of simple chamois leather, or better, oiled chamois, which is more durable and firmer, and sew the rubber cloth, muslin, and leather snugly together, and your electrode, after proper wetting, is ready for immediate use. This wetting may be with simple water, or if desirable, where very high powers are to be used, with a five per cent. or ten per cent. solution of bicarbonate of soda, the excess of fluid being gotten rid of by placing the electrode on edge, and allowing it to drip away. This electrode can be kept wet for days and weeks by simply wrapping it in a piece of oiled silk or rubber cloth. A towel wrung out in hot water, and laid upon the chamois surface for a few minutes will render it sufficiently warm for immediate application to the surface of the abdomen or back. Electrodes constructed as above, have been used with current strengths up to two hundred milliampères, and that without a particle of pain more than the ordinary, and not unbearable, burning in the skin, this burning being even less than where the Apostoli has been used. Had it been desirable, higher current strengths could easily have been administered. The after-effects, such as urticaria, etc., are in great part absent. Its durability, cheapness, ease of application, cleanliness, readiness for immediate use, comparative painlessness, and great pliability, recommend it above all other dispersion electrodes. It can be obtained of the Waite & Bartlett Manufacturing Company, of New York.

Too Many Doctors in Naples.—According to some statistics collected by the *Riforma Medica*, there is one medical practitioner in Naples to every 513 inhabitants. Medical incomes are steadily diminishing, and are shown by the income-tax returns to be distinctly inferior to incomes earned by members of other liberal professions.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 7, 1893.

	Cases.	Deaths.
Typhus fever	92	15
Typhoid fever	19	7
Scarlet fever	123	6
Cerebro-spinal meningitis	1	5
Measles	99	5
Diphtheria	115	39
Small-pox	2	0
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

State Care for the Insane.—The State Commission in Lunacy has officially announced that what is known as the State Care Act for the Insane, passed in 1890, is about to go into full operation. This act provides that all of the insane in the State, with the exception of those in New York, Kings, and Monroe Counties, shall, after sufficient accommodation has been provided, become, in October, 1893, a public charge, to be supported by the proceeds of a direct tax, in the same manner as the State prisons are now maintained. The three exempted counties had the right to come into the State system by turning over their property, after due appraisal, to the State. Monroe County has turned over its County asylum, and that institution is now known as the Rochester State Hospital. By Section 1 of the State Care Act, chapter 126 of the Laws of 1890, it is provided that the public insane shall not become a State charge until sufficient accommodations have been provided and a certificate to that effect has been filed with certain public officers, as required by law. This certificate has now been made. The buildings have been provided, and will be ready for occupancy considerably in advance of October 1st next, at which time the public insane will become a State charge. From estimates made it will require in round numbers $1,300,000 to support these public insane. The money will be apportioned by the Comptroller, and it is expected that the cost, which has been reduced very much since the passage of the act, will be still further reduced when a specific appropriation is made. Nearly, or quite, $240,000 has been appropriated annually, for some years past, for the support of State hospitals, so that the net increase in State taxation cannot exceed $1,100,000 for this purpose. At the time the State Care Act went into effect in 1890, when the mixed system of State and County Care prevailed, and when 2,200 of the most hopeless and unfortunate of all were cared for in the local poorhouses, the cost to the State, at the rates of maintenance which then prevailed in all these classes of institutions, would be $1,700,000, as against $1,300,000 under the new system, or a net saving in town, county, and State taxation of $400,000. The effect of levying this sum upon the whole State will be to decrease the rate of taxation in the interior counties, and to increase it in the counties of New York and Kings, which must continue to be the case until these latter counties turn over their property and come into the State Care system. Then, if a general tax were levied for all of the public insane in all of the counties of the State, it would be so evenly distributed that New York and Kings would be large gainers, as well as most of the other counties of the State. Those which would have increased taxation would be few in number, and the amount would be small.

Workhouse Hospitals for Inebriates.—In a pamphlet entitled "The Sanitary Side of the Drink Problem," Dr. T. D. Crothers advocates the establishment of Workhouse Hospitals for Inebriates. The author says: "The first step is to recognize the fact that the inebriate, whether continuous or periodic, has to a greater or less degree forfeited his personal liberty, become a public nuisance, and an obstacle to social progress and civilization. Second, that he is suffering from a disease which affects society, and every member of the community in which he lives, and from which he cannot recover without aid from other sources, making it absolutely necessary that he should be forced into quarantine, on the same principle as the small-pox or yellow-fever patient. This is simply carrying out the primitive law of self-preservation. Naturally, the money to accomplish this shall come from the license revenue, on the principle that every business shall provide for the accidents and injuries which follow from it. Railroad companies and other corporations are required to pay damages for the accidents which follow their business and this is conceded to be justice. But to day the tax on the liquor traffic is used to support courts and jails, where the inebriate, by fines and imprisonment, is only made worse or more incurable. Thus, literally, the business of selling spirits is increased by the almost barbaric efforts of courts and jails, and every person so punished is made a permanent patron of that business. Against this all the teachings of science and all practical study utter loud protest. The practical success of workhouse hospitals for inebriates is demonstrated in every self-supporting jail and State's prison in the country, where the obstacles are greater, and the possibilities of accomplishing this end more remote. This can also be seen in asylums for both insane and inebriates, in the various sanitaria and hospitals through the country, where the capacity for self-support and the curability of these cases are established facts. More than that, these hospitals would relieve society of great burdens, of loss and suffering, the diminution in the number of inebriates, indeed, become a practical certainty, the extent of which we can have no conception of at present. It is impossible, at the present time, to estimate the beneficial results that would follow a systematized plan of thus housing and treating the inebriate, but there are positive indications that its effect would be felt in all circles. One of the great fountain-heads of insanity, criminality, and pauperism will be closed, and a new era would dawn in the evolution of science."

Legalized Prostitution.—The Rev. Dr. W. S. Rainsford, at a recent meeting of the Christian League for the Promotion of Social Purity, held in New York, said: "Restrictive legislation is of no use if the sources of evil are not stopped. I don't believe, as many say, that America gets the dregs of Europe; but our city gets the worst of those who come. About three hundred thousand are crowded together within one square mile, and I don't believe there are more than 10,000 church seats in all that district. The biggest churches, the best preachers, and the most attractive music ought to be where the most work is to be done. The children in the lower parts of the city have a knowledge of and precocity for crime that are alarming. They have got to be amused some way, and if we don't give them good amusement they will find bad. Another point of vital importance in our social life is the method of dealing with immoral houses. By breaking up these bad houses we drive the inmates out among the tenements and other places where the evil has an opportunity of spreading farther. I would just as soon think of taking typhus patients from their isolated wards and putting them in our tenement-houses as to attempt a wholesale crusade against immoral houses. However bravely and zealously this work was done last year, I doubt its effect for good. I have heard of tenements that are in a worse condition now on account of this effort than they were a year ago. I do not advocate licensing these places, but they should be kept separate, and in that way become marked houses and known for evil. By separating the thing we make it harder for men

to sin, and the evil place, would, in the end, be driven from the purer sections of the city. You can't get rid of it at once; the facts must be looked plainly in the face, and by the indiscriminate breaking up of these places immorality is only distributed over a wider area. Something, surely, must be done which will be productive of better results toward eliminating the wholesale system of bribery which smirches our police force."

The "Hospital Manner" is a subject which is receiving some attention in our English exchanges, and we should judge that the hospital interne and externe abroad have some of the same characteristics found in this country and city. One writer says: "The average young fellow who has just passed his 'final' and has become 'H. S.,' or who has achieved some other hospital honor, is very prone to behave as if the inferior race of mortals which knows not medicine, and that of the very newest sort, were beneath consideration. His condescension toward the general public is perhaps a little less offensive than his scarcely concealed contempt for the 'outside G. P.,' who got his qualification in the dark ages, that is to say, ten years before his own time. He affects gold-rimmed glasses, not that he is myopic, but because they add dignity to his appearance; his voice, which in his early days was natural and pleasant, is toned down to an affected and deliberate monotone suggestive of self-importance and conscious superiority. When he addresses an out-patient he may be heard to say to a shivering young woman, who is deliberating whether she shall or shall not consent to have her finger amputated: 'Now then, when you have made up what you are pleased to term your mind, I will remove your finger;' or to a mother who has been endeavoring to coax her unruly three-year-old to go a little nearer to the doctor: 'Now, woman, bring that animal here!'"

Hiccoughs.—Several deaths are reported in the papers to have occurred from uncontrollable hiccoughs on the eastern shore of Maryland.

BOOKS RECEIVED.

The Geographical Distribution of Disease in Great Britain. By Alfred Haviland. Second edition. Royal octavo, 406 pages. Illustrated. Swan, Sonnenschein & Co., London. Price, $4.50.

Memoranda on Poisons. By T. H. Tanner, M.D. Seventh American edition. Revised by J. J. Ruse, M.D. 16mo, 177 pages. P. Blakiston, Son & Co., Philadelphia, Pa.

Physiology. By Frederick A. Manning, M.D. 12mo. 213 pages. Illustrated. Lea Brothers & Co., Philadelphia, Pa. Price, $1.00.

Transactions of the American Surgical Association. Vol. X. William J. Dornan. Philadelphia, Pa.

Anæsthetics—Their Uses and Administration. By D. W. Buxton, M.D. Second edition. 8vo, 222 pages. Illustrated. P. Blakiston, Son & Co., Philadelphia, Pa.

Human Embryology. By Charles Sedgwick Minot, Professor of Histology and Human Embryology, Harvard Medical School, Boston. Royal 8vo, 838 pages, illustrated by 463 wood-engravings. Price per copy, $8.00. William Wood & Co., New York.

Anatomy. By Fred J. Brockway, M.D., and A. O'Malley, M.D. Being Volume I. of the Students' Quiz Series, edited by Bern B. Gallaudet, M.D. 12mo, 367 pages, illustrated. Lea Brothers & Co., Philadelphia, Pa. Price, $1.75.

Mother and Child. Part I.—Mother, by E. P. Davis, M.D. Part II.—Child, by J. M. Keating, M.D. 8vo, 472 pages illustrated. J. B. Lippincott Co., Philadelphia, Pa. Price, $2.50.

A Manual of Bacteriology. By George M. Sternberg, M.D., Deputy Surgeon-General, U. S. A. Royal 8vo, 900 pages. Illustrated by four chromo-lithographic and four photogravure plates, and 268 wood-engravings. Price per copy, $8.00. William Wood & Co., New York.

Varicocele and its Treatment. By G. Frank Lydston, M.D. 8vo, 126 pages, illustrated. W. T. Keener, Chicago, Ill.

Rectal and Anal Surgery. By E. Andrews, M.D., and E. W. Andrews, M.D. Third Edition. 8vo, 164 pages, illustrated. W. T. Keener, Chicago, Ill.

Electricity, Diseases of Women, and Obstetrics. By F. H. Martin, M.D. 8vo, 252 pages, illustrated. W. T. Keener, Chicago, Ill.

A Clinical Study of Diseases of the Kidneys. By C. Mitchell, M.D. Second Edition. 8vo, 432 pages, illustrated. W. T. Keener, Chicago, Ill.

The Medical News Visiting List for 1893. Lea Brothers & Co., Philadelphia, Pa. Price, $1.25.

The Physician's Visiting List for 1893. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $1.00.

Hygienic Measures in Relation to Infectious Diseases. By George F. Nuttall, Ph.D. 12mo, 112 pages. G. P. Putnam's Sons, New York. Price, 75 cents.

A Manual of the Practice of Medicine. By A. A. Stevens, M.D. 8vo, 501 pages, illustrated. W. B. Saunders, Philadelphia, Pa. Price, $2.50.

Epidemic Influenza. By F. A. Dixey, M.D., D.M. 8vo, illustrated with diagrams and tables. Macmillan & Co., New York.

Manual of Practical Medical and Physiological Chemistry. By C. E. Pellew, M.D. 8vo, 314 pages, illustrated. D. Appleton & Co., New York. Price, $2.00.

The Hygiene of the Sick-room. By W. B. Canfield, M.D. 12mo, 247 pages. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $1.50.

Diseases of the Eye, Ear, Throat, and Nose. By F. E. Miller, M.D., J. P. McEvoy, M.D., and J. M. Weeks, M.D. 12mo, 228 pages, illustrated. Lea Brothers & Co., Philadelphia, Pa. Price, $1.00.

Text-book of the Embryology of Man and Mammals. By Dr. Oscar Herting. Translated from the third German edition by Edward L. Mark, Ph.D. 8vo, 670 pages. Illustrated Macmillan & Co., New York. Price, $5.25.

Text-book of Ophthalmology. By Dr. Ernst Fuchs. Translated from the second German edition by A. Duane, M.D. 8vo, 788 pages. Illustrated. D. Appleton & Co., New York.

A Treatise on Nervous and Mental Diseases. By Landon Carter Gray, M.D. 8vo, 687 pages. Illustrated. Lea Brothers & Co., Philadelphia, Pa.

A Treatise on Disease of the Rectum, Anus, and Sigmoid Flexure. By Joseph M. Mathews, M.D., 8vo, 537 pages. Illustrated. D. Appleton & Co., New York.

Finger prints. By Francis Galton, F.R.S. 8vo, 216 pages. Illustrated. Macmillan & Co., New York. Price, $2.00.

The Chemical Basis of the Animal Body. By A. Sheridan Lea. 8vo, 228 pages. Macmillan & Co., New York.

Hygiene and Public Health. By Louis C. Parkes, M.D. Third edition. 12mo, 523 pages. Illustrated. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $2.75.

Diseases of the Lungs, Heart, and Kidneys. By N. S. Davis, Jr., A.M., M.D. 12mo, 359 pages. The F. A. Davis Co., 1231 Filbert Street, Philadelphia, Pa. $1.25, net.

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Original Articles.

OSTEITIS DEFORMANS (PAGET), WITH REPORT OF TWO CASES.[1]

BY HENRY LING TAYLOR, M.D.,

NEW YORK.

OSTEITIS deformans (Paget) is a chronic inflammatory disease of advanced life affecting the long bones, spine, cranium, and pelvis, and characterized by pain, hypertrophy, and softening, so that the bones which sustain weight, as the leg-bones and spine, become curved. The bones of the face, hands, and feet are rarely affected, the joints are not involved, and suppuration does not occur.

As pictured by Sir James Paget in his original paper "On a Form of Chronic Inflammation of the Bones," published in the *Lancet*, November 18, 1876, and in the "Medico-Chirurgical Transactions" of 1877, the disease stands forth, sharply differentiated from other affections of the bones, and claiming clinical and pathological recognition as a distinct morbid process. Similar cases had been described by others, and the name had been used by Czerny [2] to describe an entirely different affection; but Sir James Paget's graphic, masterly, and original study was the first to awaken interest, and to him more than to any other we owe our knowledge of the subject. Other able observers in England, notably Lunn, Mackenzie, and Hutchinson, have since studied this affection, described specimens, and reported cases; a few cases have been reported in France, scarcely any in Germany or Italy. An important series of papers in the *Illustrated Medical News*, 1889, and in the *Medical Press and Circular* for 1890, have confirmed Paget's observations of the clinical history, symptomatology, and pathology of the affection. Thibierge was able to collect forty-two published cases to add to his own, which he published with an admirable *résumé* of the subject in the *Archiv. gén. de Méd.*, January, 1890.

In America McPhedran and McKenzie in Toronto, and Gibney in New York, have reported cases of this affection; others, reported by Lippincott, Daly, Ellinwood, and Wightman, cannot be accepted as instances of Paget's disease.

Of the 43 cases analyzed by Thibierge, 21 were men and 22 women. The onset was, with very few exceptions, after the age of forty; the average age of 32 cases was fifty-one years. One case has been reported which began at thirty (Case XXI.), and one at twenty-eight (Case XIX.); a few began as late as sixty-five.

The disease does not seem to be hereditary, or except in rare instances to run in families. In one instance two brothers (Cases XXVIII. and XXXI.) were affected; in another, a female (Case XXII.), the father and brother (Case XXXIV.) had possibly suffered.

Mr. Thomas Bryant followed one of Paget's original cases till death at the age of seventy. He had no brothers and but two sisters; these were beginning to show signs of the disease at the time of his death.

No connection is traceable between this disease and syphilis, tuberculosis, gout, or rheumatism. It is probably a general disease, with its principal lesions in the osseous system, and depends on some anomaly of nutrition of undetermined origin (Thibierge).

Of eight of Paget's cases traced to the end, five died of cancer or sarcoma; and of twenty-three cases observed by him, four became blind.

The onset is insidious and the progress exceedingly slow. The first symptom is often a dull or severe aching in the affected bones, which may persist throughout, but in some cases pain is absent, and the gradual enlargement of the head, often necessitating a larger hat,[1] or increasing deformity of the spine, tibia, or femur may be the only symptom noticed. The bones most frequently affected are the tibiæ, femora, clavicles, spine, and vault of the skull, in the order named. The pelvis is not rarely broadened and thickened. There is a tendency to symmetry in the lesions, but there may be marked deviations. The disease may rarely be confined to a single bone, as the femur or tibia, and early in its course it is often confined to but one or two. The pathological process is inflammatory rather than degenerative, and of extreme chronicity. The bone structure shows a mixture of rarefying osteitis, with the Haversian canals large and irregular, sometimes notched at their edges; and of formative osteitis with certain Haversian canals narrowed, and lamellæ of recent formation. As is usual in mixed lesions, the systems of lamellæ which surround the Haversian canals lack the regular arrangement of the normal tissue, and are turned in different directions. The vessels and Haversian canals are not dilated. It is probable that the marrow is more or less affected (Thibierge).

FIG. 1.—Section through the Skull from a Case of Osteitis Deformans.—Mansell Moullin.

FIG. 2.—Femur from Case of Osteitis Deformans.—Humphrey.

The process results in a gradual enlargement of the diseased bones, so that the skull may attain to three or four times its normal thickness, with obliteration of the diploë, and the long bones add materially to their length and perhaps double their circumference. The enlargement is fairly even and uniform throughout the affected bone, though the surface may be slightly bossed. Coincidently with this enlargement the bone becomes softer, and bends to the superincumbent weight. The femora and tibia especially, if affected, become markedly bowed outward and forward, so that the knees are separated by several inches. The trochanters rise above Nélaton's line by reason of the diminished angle between the neck and the shaft of the femur. In well-marked cases the thighs are everted, and the hips and knees somewhat flexed. The joint surfaces are not affected unless by some accidental complication, though motion may be

[1] Read before the American Orthopedic Association, New York, September 20, 1892.

[2] Wiener Med. Wochenschrift, p. 896, 1873.

[1] In Paget's first case the hat measure increased from 22½ inches in 1844, to 27¾ inches in 1876, but the head retained its natural shape. It may appear square or somewhat bossed. Even when the skull is enlarged, pain in the head has not been observed.

somewhat limited by the nature of the deformity, and possibly by ligamentous rigidity or thickening.

The spinal deformity is quite characteristic. There is commonly a bowing forward of the spine, and this is usually more prominent in the upper half, while the lumbar region loses its concavity and becomes straight. The head is carried far forward and droops toward the chest. The shoulders are round and stooping, the chest sunken toward the pelvis, the costal breathing shallow, and the belly pendulous. The spine is nearly rigid, and may be the seat of severe pain. Instead of this antero-posterior curve, there may be a lateral curvature of the spine, developed late in life. The general appearance, attitude, and gait of the patient are strikingly modified by these changes. The height may be diminished by several inches, the trunk and legs seem short, while the arms retain their natural size, and the hands hang near the patient's knees. The head is large and carried forward by the bent neck and spine, and this, with the bent and separated knees and "slow and awkward" gait, give the patient a dwarfish or simian aspect exceedingly striking and readily recognized.

The bone does not appear to be brittle, and fractures are rare; when they do occur they unite without difficulty.

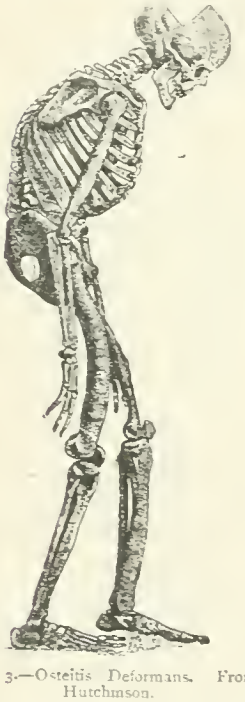

FIG. 3.—Osteitis Deformans. From Hutchinson.

FIG. 4.—Characteristic Attitude in Osteitis Deformans. From Lunn.

It will be observed that the general appearance is somewhat suggestive of extreme senility, or of paralysis agitans, where the deformities of the skull and long bones are, of course, lacking. The attitude and spinal deformity resemble those of the extreme form of arthritis deformans, known as "spondylitis deformans," but the joint lesions in the latter affection easily distinguish it. As the bones of the face, hands, and feet only are affected in acromegaly, it is easily differentiated from osteitis deformans.

If the characteristics and site of the bony enlargements and deformities, the age of the patients, the fact that the joints are exempt, and that there is no tendency to suppuration, are remembered, the differential diagnosis should not present serious difficulties.

The progress of the disease is exceedingly slow, and with little apparent effect on the health of the patients, who often live to an advanced age and usually succumb to some complicating affection. The therapeusis of this malady is unsatisfactory; nothing has been found to arrest or favorably modify its progress. I have regretted that in the first case to be related I did not try the effect of antero-posterior support to the spine by means of a properly constructed leverage apparatus. It has seemed to me that, in cases where the backache was severe, such treatment offered some prospect of relief, and I intend to try it, should a suitable opportunity present itself.

In England, the only country where it appears to have been well studied, the disease does not seem to be very rare, and it is not unlikely that, as its characteristics become more familiar to the profession, many cases may be reported in other countries.

In August, 1891, a gentleman, aged sixty, whose very peculiar gait and attitude at once attracted my notice, called to consult me in regard to a distressing backache, from which he had suffered some ten years. His back was much bowed, especially in its upper half, and his neck was bent, so that the head, which was very large, was carried forward, and at the same time dropped toward the chest. His figure was dwarfish and his height did not appear to exceed five feet, as he stood in his habitual attitude, with the legs a little flexed at the hips and knees. The latter were somewhat separated and the legs appeared short, but the arms seemed very long in proportion to the length of the body. Though my patient's intelligence was evidently unusually keen, there was something apelike in his figure and in his awkward, half-shuffling gait, which produced an impression different from anything I had ever seen.

My patient was a lawyer, born in England, but for many years a resident of Canada; a hard worker, and of regular habits. He had most of his life enjoyed good health, but for ten years had suffered with severe pain across the lower part of the back, shooting out to each side, but not down the legs nor over the abdomen; it was especially apt to come on after rising from the sitting posture, and on the whole had been getting worse. During the same time his body had become bent so that he could no longer stand erect, and five or six years previously he had noticed that the right femur was bowed forward and outward, and this had lately increased; there had been no pain in the legs. He had, he said, lost at least an inch in height in the previous twelve or eighteen months. He instinctively avoided walking, but riding in a carriage did not hurt him

His family physician, Dr. J. B. Hall, of Toronto, stated that he had been noted for his large head, but could not say whether it had increased in size in the last few years, and I omitted to question my patient on this point.

His digestion had been good and his bowels regular. His water had frequently been examined and a trace of albumin had occasionally been found, but it was usually normal in quality and amount. He did not think he was short of breath.

Examination showed the radials thickened and atheromatous, and a systolic murmur at the base of the heart. The back was much bent in the cervical and dorsal regions, so that the chin could be separated but a short distance from the chest. The lumbar region of the spine had lost its natural concavity, and was straight or slightly convex; the whole spine was much stiffer than normal. The pelvis was large and too little inclined. Both knees and hips were a little bent, the trochanters reached somewhat above Nélaton's line, and extension and rotation at the hips were somewhat restricted, but there was no muscular spasm and no indication of joint trouble. When the feet were placed together, the knees were separated by an interval of three inches, owing to the very marked bowing of the right femur. This bowing extended throughout the length of the shaft in a forward and outward direction, and was more pronounced at its upper end. The femur was larger and longer than normal The right thigh was also considerably everted. There was no other bone deformity of the legs, but the left femur was probably enlarged.

R. A., $31\frac{5}{8}$; L. A., $32\frac{3}{8}$. In the first measurement the tape just touches the right knee, in the second it is deflected inward. Circumference of thigh seven inches above patella, right, $16\frac{1}{4}$; left, $16\frac{1}{2}$.

Trochanter to external malleolus, right side, 31½; left side, 31¼.

Trochanter to knee, right, 17; left, 16.

Knee to external malleolus, right, 15⅝; left, 15⅜.

The apparent discrepancy is due to the deformity, and possibly to anomalies of the tibiæ.

The case was so typical, that I at once made the diagnosis of osteitis deformans, in which Dr. Hall concurred.

The resemblance between the femoral deformity in this patient, and that in the case of a lady, aged sixty-nine, who had been under my observation since 1888, was so striking, that a review of the latter case convinced me that her deformity must be attributed to the same cause. This lady came in 1888 to consult me about her left hip, which had been injured, three years previously, by a fall on the floor. There were eversion and complete disability at once, but her surgeons found no true crepitus and no shortening. There was excruciating pain behind the hip, down the thigh, and at the inner side and front of knee. She was kept in bed with weight extension ten weeks, and it was nine months before she could with difficulty go about on crutches. Three years after the accident she still depended on crutches, and suffered excruciating pain for which she sought relief. It is not necessary to go into the further history of the left hip, except to say that she was in time relieved of severe pain, and enabled to walk readily with a cane.

Fig. 5.—Writer's Second Case of Osteitis Deformans.

At the examination my attention was attracted by a very marked and peculiar deformity of the *right* femur, which, on questioning, she said she had first noticed a year after the accident, and which she was positive did not exist before it. The deformity existed in a very marked bowing forward and outward, especially at the upper part (Fig. 5).

The circumference of the thigh at the crotch was 18 inches on the right side, 16 on the left.

R. A. was 31¼; L. A., 30⅝. From the knee to the internal malleolus was, on the right side, 13⅝; on the left, 13¼. From the knee to the external malleolus was on the right side, 14⅝; on left, 14⅜.

Trochanter to knee, on the right side, 16½; on the left, 16¼.

There was also a moderate rotary lateral curvature of the spine, with the dorsal convexity to the left, which she was equally sure did not exist before the accident. She had had and was having more or less pain in the right (excurvated) thigh; and a few weeks later she said that the pain in the right thigh was worse than that in the left. She never had had pain in the right thigh until she began to walk after the accident; she had had a great deal of pain in the back since the accident. At the time she began to walk, she had been obliged to shorten her skirts nearly an inch.

I examined this patient again in the fall of 1891, and found that the spine and right femur were decidedly more bent. Both trochanters were an inch above Nélaton's line, and the shaft of the right femur was very distinctly enlarged throughout. The curving was such that the right popliteal space was fully three inches from the flat couch on which she was lying, and there was a space of 2½ inches between the knees, when the feet were in contact. The left leg was entirely straight. She had fallen twice within a year without known cause, the first time the previous spring, when she had broken both bones of the left forearm near the wrist. These had united with a little deformity, and she then had a good deal of pain in the arm.

Her height was fifty-eight inches without shoes, which was considerably less than formerly. Her pelvis was large for her body, but no enlargement of the head could be made out. She stood pretty erect for one of her age. Measurements showed some diminution in the distance from the iliac spine to the malleolus on either side, but an increase in the distance from the trochanter to the knee, and from the knee to the malleoli.

The typical excessive deformity of the right femur, with pain and thickening, and with a lateral curvature coming on late in life, convinces me that this is also a case of osteitis deformans.

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SOME SUGGESTIONS PROMPTED BY THE POSSIBILITY OF AN EPIDEMIC OF CHOLERA IN NEW YORK DURING THE COMING SUMMER, BASED UPON PERSONAL EXPERIENCE IN HAMBURG.

By GUSTAV SEELIGMANN, M.D.,
NEW YORK.

The recurrence of cholera in the city of Hamburg, and the possibility that New York may not escape an epidemic during the coming summer, will serve as a justification for the following lines.

It is not my purpose to criticise the preparations which have been made, or which will be made, in anticipation of such an outbreak; I wish merely to point to precautions which will be absolutely essential if this city is not to be taken at such a disadvantage as was experienced in Hamburg, even though we are more favored in regard to the supply of drinking-water, and hence are not exposed to the probability of such a rapid spread of the disease.

It is one thing to read an account of an epidemic in medical or lay papers; it is another to be in the midst of such a misfortune, and to feel the responsibilities of directing and carrying out measures for its control.

When cholera broke out last August in my native city, Hamburg, all physicians, as a matter of course, specialists as well as general practitioners, took an active part in fighting the disease. Thus I witnessed the epidemic and appreciated the many difficulties which presented themselves to physicians, because they were unprepared for, and quite uninformed as to numerous details of the utmost practical importance—such as ambulance-service, disposal of the dead, accommodations in hospitals, disinfection, assistance to the poor, supply of wholesome water, etc. Such difficulties were only overcome after considerable loss of time, and through the active and most energetic co-operation of the practising physicians.

Let the reader picture to himself a condition like the following, which was merely one of hundreds encountered daily by the practitioner:

A cholera patient, the father of a family, lying in the narrow quarters of a crowded tenement-house, without means and without any care except what the family gave him; the floor, the bed, the furniture, all soiled with discharges, and wife and children carrying this material through the whole house by means of their shoes and clothing. Then the doctor was confronted with the questions: How was the patient to be removed? Where would he be received? Who would attend to the immediate disinfection of the rooms? Where could the necessary disinfectants be obtained? Where to find shelter for the healthy members of the family? These were merely a few of the many questions which we had to determine in each individual case, as best we could.

In this city an efficient Board of Health has, it is true, already considered these questions; this department made preparations to meet an epidemic last summer and engaged the services of a large number of physicians to act as an emergency-corps. It has recently increased its permanent staff of inspectors.

But, without any doubt, in the event of an epidemic it is the general practitioner, who treats the cases, who will have to face the difficulties which present themselves, and which we have already referred to; it is the family doctor who has to act, to direct, and to decide in the thousand and one emergencies which are daily presented to him.

Aside from the question as to whether the number of inspectors be or could be made sufficient in case of a general epidemic, I believe that our present system is defective because it necessitates the waste of too much time. At the beginning of an epidemic especially, cases frequently terminate fatally in a few hours, and the great distances of some parts of the city of New York from sanitary headquarters, with which the physician must communicate, causes much valuable time to be lost.

Whether during an epidemic it would be wise to clothe every physician with the powers now possessed exclusively by health-officers (authority to direct the removal of the patient, to have the dwelling disinfected, to close up residences and places of public resort like shops and restaurants, to procure the necessary disinfectants upon orders, etc.) as it was done in Hamburg, I cannot pretend to decide; but certainly every physician of this city ought to be able to have all these things done, and done at once, and should be informed as to the necessary steps to be taken.

These reasons prompt me to suggest the publication, by the Health authorities or some other public body, of a pamphlet containing points referring to the prevention, diagnosis, and treatment of cholera, disinfection, etc., carefully and concisely worded; and every physician of the city should be put in immediate possession of this pamphlet.

Necessarily, a work of this kind should not be an elaborate treatise on the pathology and therapy of cholera—only the practical and important points should be given.

I would propose the following as a foundation for such a paper, although my suggestions of course will not include everything that may be said on the subject; I do not feel competent, as a comparative stranger here, to lay down rules which might conflict with existing laws; I merely wish to utilize our experience during the Hamburg epidemic in making a few suggestions:

1. The present system of having every suspected case promptly investigated by an expert bacteriologist is highly commendable, but the physician should understand exactly what steps he must take to have such an investigation made; therefore directions on this subject should occupy a place in the pamphlet.

2. The sanitary bureau very properly publishes full reports of the mortality and morbidity daily; the physician should be instructed in the manner of making his returns and securing their immediate delivery (telephone, telegraph, etc.).

3. There is no doubt that cholera can be treated better in hospitals than in private practice; the difficult nursing of cholera patients and certain measures, such as intravenous injections, cannot well be carried out in the homes of patients; nevertheless, the public, especially the uneducated portion, have an aversion to cholera hospitals. It may become necessary to empower every physician with authority to order the removal of a patient to the hospital without awaiting the arrival of a health inspector. At any rate, provision must be made for a great many beds; a single large cholera hospital will not suffice. Patients from distant parts of the city would die on the way to such a hospital, no matter how centrally it were located. Several hospitals, perhaps many, must be provided in different parts of the city. Each day—during

an epidemic—the authorities should publish a list of unoccupied beds; this information must reach the physician every day, so that he will know at once how he can dispose of his patients, thus preventing the possibility of having them refused at one hospital after another.

4. Even our excellent ambulance-system will be found wanting in the event of an epidemic; hence we should provide for additional facilities for the transportation of patients and dead, making provisional contracts with expressmen and tradesmen for the use of their wagons; in this event the physician should be advised where and how to obtain such facilities.

5. Disinfection of the surroundings of the patients being necessary immediately upon the discovery of each case, the existence of a single central office from which the disinfecting corps proceeds will not be enough. It would be well to divide the city into small districts, the smaller the better, each furnished with its own disinfecting station which should be provided with ample disinfecting material and employees; every physician should be informed of the location of these stations.

6. In the event of a severe epidemic, even these precautions will be found inadequate. I recall, for instance, that even after the establishment of additional disinfection stations in Hamburg, there were about four hundred calls for disinfection which could not be attended to on a single day, and that the number of such unsatisfied requests increased at the ratio of several hundred each succeeding day. The physician, therefore, should be able to instruct the laity—at least the intelligent portion—in the manner of using disinfectants. To do this he must, of course, be well versed in this matter, and it will be necessary for him to know where he may send poor people for free disinfectants. Hence the pamphlet should contain definite and concise directions regarding the nature, quantities, and methods of employment of disinfectants.

7. Since there is a likelihood that there may be a scarcity of such chemicals, or even that some enterprising firm may attempt to corner them, it becomes almost a necessity to lay in a supply now, a supply which will be sufficient to outlast any ordinary epidemic. If we are spared such a scourge, the worst result of such an early and large purchase will be that the city will sustain some loss when the disinfectants are sold again, or that such chemicals will have to be stored for a long period until the ordinary requirements have exhausted the supply. Such a course would permit the insertion in this pamphlet of a list of stations where disinfectants would be given gratis to the poor upon presentation of orders furnished by the authorities to physicians, and duly signed by the latter.

8. Besides the question of disinfecting dwellings, a most important consideration is the proper disposal or destruction of personal effects (clothing, bedding, upholstery, carpets, etc); this comprises, according to modern ideas, either destruction by fire or disinfection by steam. Certainly it seems quite out of the question to cart all such material through the city, transfer it to vessels, and again unload it upon some neighboring island for disinfection; it seems indispensable that provision should be made for the establishment of a sufficient number of buildings throughout the city where infected material can be efficiently disposed of; the addresses of these places should be inserted in the pamphlet.

9. Similarly, it may be worth considering whether it would not be well to indicate where the poor could obtain wine, stimulants, drugs, etc.—gratis.

10. Houses of refuge should be established for the destitute children of the dead and of those under treatment in the hospitals; such children cannot be sent to orphan asylums until they have passed the usual period of observation or quarantine. And after an infected tenement-house has been closed up, what is to become of the healthy, homeless inmates who are without means, especially since they must be kept under observation for a certain period?

11. It must not be forgotten that the physician himself is frequently the agent by which cholera germs are disseminated. Therefore the pamphlet should contain brief instruction to the doctor regarding the means of disinfecting himself; he should be advised how to treat his clothing, hands, beard, etc. It has been proven that the physician frequently spreads cholera germs by stepping into the discharges; hence it would be well for him to wear rubber overshoes which can easily be rendered harmless with various strong disinfecting solutions.

12. Finally, a short and practical *résumé* of the treatment of cholera might be included. The large number of remedies which have been suggested in this disease shows that we have not yet accomplished much in its treatment. A brief account of the measures which were most useful during the recent epidemics will be not only of interest but of value. This will include mention of the different methods of supplying the system with physiological salt-solution, intra-venous, hypodermatic, rectal injections, etc.

The execution of the precautionary measures above recommended will cost great sums of money. But can anyone doubt the wisdom of such precautions, even though we find eventually that we have been fortunate enough not to have required them? Is it not better to spend half a million in an attempt at prevention than to risk the loss of many thousand lives and of many millions of dollars in commerce, etc.; which risk we are taking when we await an impending epidemic with no other precautions than ordinary health regulations and a quarantine, which, though apparently ever so perfect, will not effectually exclude infection.

640 MADISON AVENUE.

REFLEX ECZEMA IN CHILDREN, WITH A CLINICAL ANALYSIS OF THIRTY SELECTED CASES.

BY ISADORE DYER, M.D.,

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In its usual acceptance the term eczema refers to a skin eruption with catarrhal tendencies, having an indiscriminate localization, but frequently attacking the more sensitive regions, as the muco-cutaneous junctures and the flexor surfaces. Usually some local factor is directly or remotely responsible, though constitutional causes are at times contributing.

The object of this paper is not to separate from generic eczema the diseases here discussed, but rather to classify in its proper division a type which, from its characteristic features, deserves a definite place. Neurotic or reflex eczema is distinctly a catarrhal process, and develops, as any eczema, from an inflammatory action in the rete Malpighii. In every other regard this type is *sui generis*. The localization is as remote as possible from the flexor surfaces, and the muco-cutaneous junctures are never attacked. The eruption is almost invariably bilateral and symmetrical. Each area of disease is marked with a periphery so well marginated that it stands out strongly defined against the adjacent healthy skin.

The extensor surfaces of the extremities are the usual seat of the disease, and only late in the process is the trunk affected, and then on the dorsum first. The cheeks, forehead, chin, fronts of ears, and the scalp are likewise affected, while a healthy area persists around the eyes, nose, and mouth, even in the severest types and throughout the entire course of the disease.

In children these cases occur and are usually obstinate. The child presents reddened patches on the cheeks, almost at birth. These, slowly spreading, begin to scale, and at times to weep. This condition persists. Scratching, washing, and other factors of irritation, hasten the process. The weeping increases. Infection of the exudation follows, and crusting results. Exactly the same process occurs on the body. The shoulders, exten-

sor surfaces of the hands and arms, feet, legs, and thighs are affected. The diagnosis of eczema is easy. Treatment follows. The eruption improves, perhaps disappears. The case is discharged, but returns usually, and often with an eruption as severe as, or worse than, before. This continues for weeks, months, and even years—a history of relief and relapse, or of no relief at all. Despairing of cure the mother accepts the disease as an essential to the child's development, and waits for the condition at fault to wear away.

During my late service at the New York Skin and Cancer Hospital, through Dr. George T. Elliot's kind assistance and courtesy, I had the opportunity of studying a large number of these cases in Dr. Bulkley's out-door clinic, of which Dr. Elliot was in charge.

The lack of results from customary applications and the persistency of the disease led to the belief that there was some essential fault in the conception of the conditions. Nearly every case presented the same clinical history. The disease appeared shortly after birth, grew progressively worse; treatment would relieve, but recurrences were the rule. Intense itching, worse at night, with restlessness and fretfulness, worse as the recurrences came, finished the history. From over a hundred cases treated locally in every way which could be thought of, I have selected typical cases for consideration. In these the remote causes were sought for. Reflexes were found and eliminated where possible. The results were positive where the indications were met; while in all the external treatment was made routine.

A boy, eleven years of age, was presented for treatment, with a typical eruption on his face, arms, and legs. The disease was confined to his cheeks, extensor surfaces of forearms, arms, thighs, and legs. The patches of disease were papular and scaling, and they presented the characteristic marginate periphery. The patches were reddened and the papules distinct. The distribution was distinctly symmetrical and bilaterally so. The patient was six weeks old when the disease began. The history was the usual one, relapses occurred from year to year. Excluding all other possible factors, the history of asthma from infancy was elucidated. The eruption, it was learned, always appeared with an attack of asthma. The boy was discharged after a time, cured of his eczema. Twice he returned for treatment after lapses of two or three months, and both times with both asthma and eczema. At each period his asthma was treated, and as this was improved the eczema vanished. A note of import in this case is that, for three months nearly, the child had been locally treated for the eczema without any perceptible improvement—this before the asthma was discovered.

A boy, four years of age, was brought by his mother for treatment. His was a typical case. The area of healthy skin around the eyes, nose, and mouth was surrounded by a framing mass of crusted, fissured, exuding patches of disease, covering the cheeks and ears, forehead, scalp, and chin. The hands, on their backs, were thickened, rough, fissured, and somewhat crusted. The arms and legs were less severely marked, but were only affected on their extensor surfaces. The trunk was free excepting the shoulders, where there were two symmetrical patches. The eruption on the arms and legs occurring in patches consisted of typical, sharply marginated aggregations of papules and vesicles, ending abruptly at the periphery of the patches and not spreading, as eczema is accustomed to do, in discrete papules into the surrounding skin. The eruption was symmetrical, patch for patch, with the same localization and configuration on corresponding parts of cheeks, arms, etc. From his fourth month this boy had been treated. He had never been free from the disease, though in winter there appeared to be some amelioration. The general condition of the patient was excellent. His development for a four-year old was unusual. Every presumable cause was investigated, and finally the prepuce was examined. I found a long prepuce, closely adherent, with a pinhole orifice. Circumcision was advised. On August 7, 1891, the child was circumcised, cocaine anæsthesia, carbolic acid, gr. v., in oxide of zinc ointment, ℥ j., was prescribed for the eruption.

August 11th.—Face nearly free from eruption. Eruption generally improved. All local treatment suspended.

August 28th.—The face and legs were well. Hands and arms alone affected. Had used no local treatment since August 11th.

September 11th.—Relapse on legs—presumably from scratching. Hands and arms improved. Ordered menthol, gr. v.; starch, ℥ j.; in oxide of zinc ointment, ℥ j., for the legs.

October 9th.—Child well.

November 23d.—Reports for observation. No recurrence.

December 26th.—No recurrence.

No.	Factor.	Sex.	Age.	Location.	Duration.	Remarks.
1	Diet; diarrhœa.	Male.	18 months.	Cheeks, forehead, arms, and legs.	2½ months.	Corrected diet. Cured in five months.
2	Over feeding; constipation.	Male.	3 months.	Cheeks.	3 months.	Improved. Relapses when constipated.
3	Irregular nursing; mother costive.	Female.	5 months.	Cheeks.	3 months.	Cured in two months.
4	Mother costive.	Female.	6 months.	Cheeks and scalp.	.....	Cured in seventeen days.
5	Irregular nursing; constipation.	Male.	4 months.	Cheeks and forehead.	One week.	Cured in one week.
6	Teething; irregular diet; convulsions; constipation.	Female.	5 months.	Cheeks.	4¼ months.	Cured in six months.
7	Environment; diet; constipation.	Male.	7 months.	Scalp and face.	2 months.	Cured in two months. Relapse in first month due to attack of urticaria.
8	Furunculosis, in mother and child; adherent prepuce.	Male.	6 months.	Face, scalp, and arms.	3½ months.	Four months' treatment. Nearly well when last seen. Died of pneumonia.
9	Adherent prepuce.	Male.	4 years.	Face and extremities.	3 years and 8 months.	Circumcision. Cured. (See special case.)
10	Diet; adherent prepuce; urticaria.	Male.	19 months.	Face.	1 month.	Corrected diet; but did not get well until prepuce was reduced. Three months' treatment.
11	Anæmia; epistaxis.	Female.	3 years.	Arms and legs.	6 months.	Cured in two months.
12	Irregular diet and adherent prepuce.	Male.	4 months.	Face, scalp, and extremities.	1 month.	Child died of gastro-enteritis while under treatment.
13	Irregular diet; irregular bowels.	Female.	19 months.	Face and shoulders.	14 months.	Improved; but disease persisted through neglect of treatment.
14	Mixed diet; irregular bowels.	Female.	14 months.	Face.	13 months.	Cured in four months.
15	Irregular nursing.	Male.	4 months.	Face and ears.	2 months	Cured with regular nursing.
16	Teething; irregular diet.	Male.	2 years.	Forehead, cheeks, and ears.	1½ year.	Cured in one month by correcting diet.
17	Mixed food and irregular nursing.	Male.	4 months.	Face.	2 weeks.	Corrected nursing and stopped other diet. Well in three weeks.
18	Oatmeal; sweets, etc.	Male.	3 months.	Face.	2 months.	Nearly well when last seen.
19	Mother costive.	Male.	4 months.	Face, neck, and scalp.	1½ month.	Cured in three weeks.
20	Meat and mixed diet.	Male.	8 months.	Face.	6 months.	Cured in three months.
21	Mother costive; irregular bowels; oatmeal.	Male.	11 weeks.	Face.	6 weeks.	Stopped oatmeal; corrected mother's bowels. Cured in a week.
22	School anæmia.	Male.	5 years.	Face, hands, neck, and forearms.	6 months.	Stopped school; iron and tonics. Well in two months.
23	Irregular diet.	Female.	6 months.	Cheeks, forehead, and legs.	4 months.	Corrected diet; no medicine. Well in two months.
24	Herpes zoster facialis.	Female.	15 months.	One cheek.	1½ month.	Concomitant with zoster; antipyrin. Cured in one month.
25	Mother costive; constipation.	Female.	2 months.	Face.	.....	Cured in two weeks.
26	Adherent prepuce.	Male.	3 years.	Face, legs, and arms.	1¼ year.	Circumcision. Well in one month.
27	Irregular nursing.	Male.	2 months.	Cheeks, scalp, and forehead.	Since birth.	Corrected nursing. Well in two weeks.
28	Mixed diet; irregular bowels.	Female.	8 months.	Face, neck, and scalp.	6 months.	Treated, and was improved.
29	Adherent prepuce.	Male.	6 months.	Face.	4½ months.	Reduced prepuce. Well in two weeks.
30	Adherent prepuce.	Male.	14 months.	Face.	4 months.	Reduced prepuce. Well in one month.

Little need be said concerning the treatment in these cases, except that the indications must be met. In the boy with asthma, the iodides, bromides, arsenic, hyoscyamus, and other remedies were used with success at different times. In cases where gastro-intestinal disturbances were at work, Reed & Carnrick's pancrobilin served a good purpose. Constipation in the mother was relieved by systematic use of cascara sagrada, aloin, belladonna, and strychnine pills, and rhubarb and soda in mixtures. Adherent prepuces were reduced. Furunculosis in mother and child was treated locally and internally. The mother was given calcium sulphide in ¼ grain pills each second or fourth hour. Ichthyol in three per cent. ointment, or the same strength in collodion; carbolic acid, ergot, and vaseline (Dr. Bulkley's formula); compound tincture of benzoin painted on—all were used at various times. Irregular feeding, irregular or mixed nursing, environment, hygienic conditions, urticaria, worms, bronchitis, tuberculosis, etc., all need careful attention, and these and other faults were discovered in the cases discussed. Locally any protective, astringent, non irritant ointment will answer.

The following proved serviceable in various conditions:

℞. Ichthyol..... 3ℨ
Ungt. oxidi zinci..... q. s.
M. Sig.: Ext. use.

In pustular conditions:

℞. Amyli,
Magnes. carbonat.....āā ʒ ss.
Ungt. aquæ rosæ..... ʒ j.
M. Sig.: Ext. use.

Where exudation was marked:

℞. Acid. boric..... ʒ j.
Lanolin..... ʒ j.
M. Sig.: Ext. use.

Protective:

℞. Ungt. picis liquidæ..... ʒ iv.
Pulv. oxidi zinci..... ʒ j.
Ungt. aquæ rosæ..... ʒ j.
M. Sig.: Ext. use.

Where thickness has occurred:

While salicylic acid, ℈j. to ʒ j.; oxidi zinc. ointment and carbolic acid, gr. v.; Ext. ergot fl., ʒ j.; oxidi zinc. ointment, ʒ j., were used as "routine" applications.

The plea for the diagnosis is made for these reasons: The disease is characteristically one of the extremities. It always attacks the extensor surfaces. It is always present as a distinct patch, with a periphery well defined against the healthy adjacent skin. It is symmetrically bilateral in location, configuration, and symptoms. It is found associated with some reflex disturbances directly responsible for its appearance, because the eruption disappears when this disturbance is removed and relapses when the disturbance recurs. It resembles closely in its symptoms other recognized neurotic types of skin eruptions, notably erythema.

Vinegar vs. Bichloride.—It takes a long time to convince people that bichloride of mercury is not a good antiseptic practically on account of its ready combination with albuminous bodies. The cause will perhaps be helped by the investigations of Drs. Abbott and McCormick, of the Johns Hopkins University. These gentlemen find tha a weak vinegar, containing only seven per cent. of acetic acid, is more effective as a germicide, but adds that the tendency of the bichloride is to encapsule the germs, which are thus rendered innocuous for the present, but may be afterward set free by other agencies.

Dr. Paul Raymond has been awarded a prize, offered by the President of the French Republic, for the best essay on the means to be adopted by the Legislature or by private initiative for restricting the abuse of alcohol and combating its dangers.

THE DOUCHE: ITS VALUE AS AN AUXILIARY TO MEDICINE IN HYGIENIC TREATMENT.

By G. MANLEY RANSOM, M.D.,
NEW YORK.

In the writings of prominent practical authorities, Fleury, Beni-Bard, Macario, Duval, and others, the douche is described as being the most important agent in hydrotherapy, owing to the unequalled rapidity and facility with which physiological effects can be produced and rapidly varied by its use.

These varying effects depend upon the patient's condition, the kind of douche, its temperature, force of impact, the duration of that impact, and the subsequent treatment used to influence reaction. These effects are related also to kind and degrees of action upon the circulatory and nervous systems, and are produced by the mechanical impact of water, varying in temperature and force when applied to the body, generally and locally, with a view to immediate and ultimate results of stimulation and sedation.

To demonstrate the verity of the claims to superiority on the part of the douche, we will briefly consider its distinguishing features, mechanical and otherwise.

Its successful use depends upon the ability to control and direct the forcible impact of water upon the whole body or any part of it, this control being absolute as to the force, temperature, duration, and form of the douche.

The mechanical appliances must be adequate to vary at will, and instantly, any one or more of these functions, and in such a manner that the physician can use the douche in one or more forms at the same instant, if judicious; moreover, their manipulation should not distract his attention from the patient. In a well-devised douche all the requirements above menticned would be readily met, whether they were extreme and rapid changes of temperature, pressure, or form of application.

To the above authorities, supported by Charcot, Erb, Dujardin-Beaumetz, Semmola, Ziemssen, and others, we are indebted for the rationale of the physiological action of the douche. They having found that pressures, which by the gauge differed greatly in force, produced sensations of pressures differing as greatly, similarly, fluctuations in temperature, evidenced by thermometric changes, caused corresponding variations in the sensations of heat, these sensations closely following the movement of the mercurial column in direction and degree. In all cases it was the change or variation of temperature or pressure which was easily distinguished—the continuous use of any one temperature or pressure producing a comparatively slight effect upon the sensations—while, in all cases, the more suddenly pressure or heat was applied or varied the greater was the influence upon the sensory nervous system as shown by voluntary and reflex phenomena. The following statements, confirming what has just been said, express the opinions of the physiologists Foster, Carpenter, and Baker, and are to the effect that a change in temperature of the skin necessary to produce a sensation must have a certain rapidity, and the more gradual the change in temperature is the less intense will be the sensation; also, that the same effect of contrast is observed in relation to pressure, that the more suddenly pressure is applied or increased the greater the sensation, and *vice versa*. These facts would alone justify, or rather necessitate, the belief that there is a correlation and equivalence between sensations and all extrinsic forces. In relation to those under present consideration it will be seen that in the douche, which combines the only stimuli giving rise to tactile sensations in the skin, viz.: variations in heat and pressure, are also combined the conditions necessary to rapidity, variety, and exactness, of pressure and temperature, which are indispensable to scientific accuracy in promoting and regulating certain physiological actions.

As sensations, both objectively and subjectively evi-

denced, are of acknowledged importance as guides in medicine, it requires no arguments to prove that sensations of pressure, heat, and cold, which by depressing or stimulating the vital actions serve for purposes of discrimination, are of greater value to medicine the more accurately we can regulate them for purposes of diagnosis and treatment. Hence it follows, *à priori*, that in hydrotheraphy the douche is the only adequate means of obtaining the results necessary to a thorough and discretionary exercising of the sensory nervous system through the skin in all its relations to conservation and nutrition of the organism.

As an aid in diagnosis by means of this treatment we may learn, definitely and more promptly than by any other means, the way in which certain conspicuous functions vary in unison, *i.e.*, how the rate of a patient's pulse and breathing increase with the amount of exercise he is undergoing; and by accumulation and comparison of such observations, conducted so as to reveal the actions of organs under varying conditions, we are enabled by data so accumulated to interpret the facts presented by each case for treatment.

In hygienic treatment, which is by far its most important application, the douche adds the enormous economy of an educated control of forces in promoting oxidation and thereby general nutritive increase and vigor to the definite total of vital force of the patient.

To better understand the results in the cases to follow, a brief explanation of the phenomena attending the application of this treatment will be useful. When properly applied the douche is generally immediately followed by a feeling of elation and a sense of renewed vigor.

As regards these immediate effects, whether the increased amount of oxygen taken in can so soon sufficiently increase vitality as to cause these feelings of exhilaration and increased vigor is perhaps a matter of doubt; but there can be no doubt that the exaltation of the vaso-motor functions, by this rapid diversion of blood and nervous energy to and from organs through varying afferent and efferent impulses, must result in a temporary exhaustion of the limited common fund of nerve-force of the system, and before the regeneration of this force through the effects of the increased oxidation and elimination the whole organism must rest during a lowered functional activity. This condition produced by the action of the douche is analogous to sleep, and like sleep is a position of advantage to the vital economy—all the organs resting after this exercise which has caused increased respiration and changes in the circulation while being directed at certain organs for their immediate advantage, or to relieve others from irregularities or excess of function, and the feeling of elation and renewed vigor is probably the result of an equalized condition of the circulation and a modified action of all the organs through a new balance, in which excesses and defects in the circulatory and nervous functions have so far been relieved by a physiological division of labor. After this rest, that is, after reaction from the effects of the douche has thoroughly taken place, and the system is again active in its functions, comes the test of this new balance. Of course its duration will vary with the nature and conditions of the case; confirmed diseases usually relapse more or less after a short interval, while less obstinate diseases, even of long duration, and which have proved rebellious to other modes of treatment, are often promptly cured by the addition of applications of the douche.

The same results may be claimed for many remedies in their spheres, but the douche is pre-eminently an hygienic agent. Its value is not restricted to particular classes of cases, and where the equipment is complete, and the treatment judicious, most of the important effects obtainable by hydrotherapy and other means used in hygienic treatment may be produced by it with less tax upon the strength and endurance of the patient than by any other means directed to the same ends. It holds and builds on the advantage gained, and by the active process of construction and destruction it becomes an important auxiliary to medicine in supporting and improving the functions and thereby promoting the action of medicine in a way that is received with increased approval by physicians in this country, as well as abroad.

During eight years of experience in practice at Richfield Springs, and incidentally in the use of hydrotherapy in a great variety of diseases, it was brought to my observation that many cases, especially of a chronic nature, which had previously responded unfavorably to medicine were brought promptly and favorably under control of such medicines after or during a course of baths.

At the present time, for the purpose of favoring the action of medicine, the douche takes precedence on account of superior properties, as described, whereby the powers of the system are recuperated, favoring normal excretion and absorption.

The following douches described by French authors, and named by them, spray, rain, sheet, alternative, Scotch, broken-column, column, and Charcot, are chief among those used in hygienic treatment, each of them having special indications, were used alone or variously combined in conformity with the requirements of the following cases.

Case I.—Mr. H——, aged sixty-nine years, had suffered since an attack of the grippe with a cough, and so marked a loss of strength as to have forced him to give up his business. At Dr. Knipe's request I made an examination with a view to applying the douche. Found, as the doctor had said, some dulness over the lower lobes of the lungs, and râles of different kinds at various parts of his chest. Heart seemed nearly normal. Action fair, save when accelerated by fits of coughing, when the pulse would intermit considerably. The arteries seemed a little hard. Temperature slightly above normal. Kidneys, the doctor said, were acting very well. Other functions in fairly good condition. I fully coincided with Dr. Knipe as to his plan of using the douche to assist his treatment in relieving circulatory stasis in the lungs. The patient's age and the condition of his arteries made it necessary to take special care as to the application. The temperature and force of impact required to be gently and evenly graduated to avoid shock and injurious reaction.

As he was very sensitive to cold, the temperature of the douche room was increased to 80° F. He received first, for thirty seconds, a general douche at 100° F. The pulse and breathing then being favorable, he next received upon the soles of the feet rapidly alternated douches from two smaller nozzles more coarsely perforated, to increase the impact, with temperatures at 105° and 60° F. for fifteen seconds, these were next applied to the tops of the feet and on the legs for fifteen seconds. He was wrapped in a hot sheet and his feet and legs briskly rubbed.

When dressed he described his sensations as delightful. He breathed deeply and regularly, his pulse was relieved from high tension quality, and his cough stopped.

Having received twenty douches modified to suit the improvements in his case, and meanwhile continuing his visits to Dr. Knipe, his condition of health was such as to enable him to resume his business.

Case II.—Mr. B——, from Chicago, aged fifty-two, merchant; had received benefit three years ago from douches taken at Dr. Keller's establishment in Paris, as prescribed by Dr. Charcot. He suffered from cerebral neurasthenia, chief symptoms being marked insomnia, and inability to apply his mind to business. After four months' treatment in Paris he returned to Chicago, and remained in excellent health until a crisis in his business and family troubles caused him to again break down. At his urgent request I applied the kind of douche he had last taken, but found, as I had predicted, that his physical condition was not up to its requirements. Accordingly I administered a preparatory treatment consisting of a warm douche, finishing with a dash of water

at 50° F. to the spine, followed by massage. In the course of a few treatments he was in condition for, and received, the douche, as in Paris, as follows: Two hours after eating, his circulation being accelerated by a brisk walk, the broken column douche was applied at a temperature of 50° F. and a pressure of two atmospheres up and down the spine for twenty seconds. The solid column was then applied with the same force and temperature for fifteen seconds to the tops and soles of the feet. He was then enveloped in a cold rough sheet, and briskly and forcibly rubbed all over the body. Satisfactory reaction followed. After rapidly dressing, and a short brisk walk, the treatment was finished. He remained under my care for six weeks. His insomnia disappeared, and his appetite steadily improved. He returned to his business in Chicago, and has since remained well.

Case VI.—Dr. O'B——, Alexandria, Va., thirty-eight years old, had been successfully treated by Dr. R. W. Taylor for an eczema and septic condition resulting from a scratch received in operating. Was sent to me October 7, 1892, by Drs. Taylor and M. Allen Starr for douches to assist in relieving insomnia and great mental depression. Douches, varied, and followed by massage, were given as directed by Dr. Starr. These were immediately followed by a refreshing sleep, and an improved mental condition. After the third douche he slept soundly for two hours, his rest at night also steadily improved. When ten of these daily treatments had been given, by Dr. Starr's direction, I substituted every second day galvanic baths, current strength from fifteen to twenty milliampères with massage.

Under these combined treatments he steadily improved until November 7th, when he left for the south. A letter from him, dated November 26th, stated that he had resumed his practice, and work as surgeon for the R. & D. R. R. & C. and O. R. R. He adds: "I have steadily improved since I left you—am as busy as a bee, and happy as the day is long. What a contrast in comparison with my condition when I came to New York!"

These cases, selected from a large number treated, illustrate the general applicability of the douche as an auxiliary to medicine.

30 East Thirty-third Street.

THE GROWTH OF THE ACADEMY.[1]

By ALFRED L. LOOMIS, M.D., LL.D.,

the retiring president.

Fellows of the New York Academy of Medicine: Before I pass to my distinguished successor the insignia of office with which you honored me four years ago, it seems fitting that I should review in brief the work of these years, that we may the better appreciate the rapidly increasing breadth of our fellowship, and recognize that privilege and obligation are twin sisters in their growth.

The story told in dates and figures alone might be cold and formal, but the ratio between 640 and 270 bristles with interest when each unit means a Fellow, and we recognize that the new members received in four years equal more than thirty-three per cent. of our entire membership so short a time ago. And interest passes to pride when among the new faces we see so many of the older members of the profession whose honorable positions and intellectual work have brought us both strength and renown. Nor is our pride without hope for the future. Among the younger members who now share our fellowship are found many of the most active workers in the profession, not a few of whom have already gained honorable distinction for work done. Every line of our growth is marked by equally eloquent figures. The 7,000 new volumes and the 2,000 new pamphlets which already crowd our present shelves to overflowing, and have raised the catalogue of our library to 27,000 volumes and 8,500 pamphlets, represent but a slightly lower per cent. of increase. The breadth of privilege which these figures indicate cannot be made more clear, nor is it possible to obscure the twin obligation. Men and books are valuable only when combined with mental processes. How faithfully we have met this obligation is shown in the fact that the number availing themselves of the privilege of our library has increased in three years three hundred and fifty per cent., while men and means have increased one third. The work done in our library has increased three and one-third times. These figures gladden our hearts, for they indicate that our fellowship is doing ten times more brain-work than it did four years ago, its intellectual status is being elevated, and a deeper enthusiasm and stronger purpose is giving more certain relief and comfort to suffering humanity.

It may not be uninteresting to recall the more material side of our history in these harvest years.

In 1888 we held a clear title to the Academy building in Thirty-first Street, which was valued at $60,000, and our building fund had reached $96,000. Under the stimulus of Dr. Jacobi's enthusiasm there had been many discussions in both Academy and Council regarding the immediate necessity of a new Academy building, which finally crystallized at the regular meeting of October 18, 1888, into the unanimous passage of the resolution "that in the opinion of the Academy it is now expedient to take active steps toward the purchase of a site and the execution of a new Academy building." The Trustees and Council were instructed to carry out the intents of this resolution. Owing to unexpected complications it was not until March 7, 1889, that the Council reported to the Academy the execution of a contract for the purchase of a site on West Forty-third Street, at a cost of $90,000. Formal authority to draw upon such funds of the Academy as could be legally used for that purpose was conferred upon the Trustees by vote of the Academy at the meeting of April 14, 1889, when a special Building Committee, composed of Drs. Jacobi, Herrick, Peters, Castle, and Loomis, was appointed and entrusted with all matters of detail. Two months were spent in consideration of plans and designs, and on June 4, 1889, the Academy accepted unanimously those of Mr. Robertson, which the Building Committee had submitted as having their approval, and authorized the Committee to make contracts for the erection of a building in accordance with these plans, and under the supervision of Mr. Robertson as architect. These instructions were obeyed with the least possible delay, and on October 2, 1889, less than one year from the date when the Academy assumed a definite position on this question, the corner-stone of this building was laid with appropriate ceremonies. At the end of another year your Building Committee formally transferred this completed building to the Board of Trustees.

The anniversary meeting of November 20, 1890, was made memorable by the dedication of the most complete and appropriate building of its kind in the country, and the formal opening of its library to the profession and the public. It was an occasion which will be long remembered, not alone by those present, but by all who appreciate the full significance of the event; when distinguished members of our profession from neighboring cities, and eminent citizens of our own city, who had given generous proofs of their sympathy, united with us in celebrating the consummation of our long-cherished hopes.

Never was there more beautiful illustration of the truth that, to earnest men, the end is but a new beginning, than in the spirit of all that was said or done on that occasion. Our anniversary orator looked backward only to see in the zeal which had attended our growth from the first the promise that our Academy was to go forward in the future to enlarge in generous measure her chosen work, and consummate her functions, sustained by a common impulse among her Fellows to work for work's sake.

That eloquent champion of our library, your honored ex-President, Dr. Jacobi, saw in this building no home

[1] The Valedictory Address delivered at the meeting of the New York Academy of Medicine, January 19, 1893.

for lotus-eaters, but the visible vestibule for a new epoch in medical learning and achievement. His strong words found faithful echo in the trembling accents of our honored, our beloved Barker. With the dawn of another life already tinging his horizon, his prophetic promise to this Academy of a new era. so full of grander things, that none would venture to cast a horoscope of its future, was spoken in tones that almost made real the spirit of "now, Lord, lettest thou thy servant depart in peace," nor were such conceptions distorted images of blind affection.

In the communication sent us by our noble and generous friend, D. Willis James, were these words, which should be repeated to every large-hearted citizen of New York: "Look at the magnificent work the medical profession has done and is doing. Remembering all they have accomplished for suffering humanity, let us, as citizens of New York, see to it that in our midst the means are ample and promptly supplied for the most scientific research in all departments of learning, but especially in medical science."

That full appreciation of our profession is too often lacking when most expected, must be confessed with sorrow, for Weir Mitchell told us that although the medical guild possessed a high code of morals which was old before Christianity was born, a code based on honor, loving brotherhood, and the largest charity, even when made practical in self-sacrifice has never been fully appreciated even by its recipients, else would they be more eagerly generous in their assistance in building halls and furnishing libraries.

The old but ever new spirit of our profession, which has borne it onward and upward regardless of rewards, was most beautifully portrayed by our loved and honored brother, Oliver Wendell Holmes, who wrote in his greeting for that night, "An Academy which fulfils its highest function is a true working body. It deals with loving subjects. It handles unsettled questions. It sets tasks for its members and furnishes, so far as it can, the appliances required for their accomplishment. It offers rewards for meritorious performances and sits in judgment on the aspirants for distinction. It furnishes the nearest approach we can expect to a fixed standard of excellence by which the work of new hands and the new work of old hands can be judged. It is a barrier, a breakwater against the rush of false pretensions which are constantly attempting to find their way into public confidence. Academies have been too often thought of as places of honorable retirement and dignity and ease-nooks, where emeritus professors and effete men of letters, once cocks of the walk, could sit in quiet roosts while the fighting, the clucking, and the crowing were going on beneath them." With such words of cheer and sympathy, of promise and prophecy, of warning and advice, amid the gracious smiles of approving friends, this building was dedicated a little more than two years ago. Experience has shown it in every way suited to our wants and work, and from the day of its dedication until now, not only has prosperity attended us, but a broader and more tolerant spirit has been developed in our membership. The links which bind together the senior and junior members of our fellowship have grown stronger; jealousies and intolerance have given place to liberality and kindness, and the Academy has become the centre of the best thought and the best spirit of the entire profession. The young enthusiast and the aged conservative are crossing swords with that spirit of modest recognition of truth in which one scientific worker is always willing to meet his fellow. We are to day exerting a greater influence on public thought and action than ever before. We are being more and more appealed to in the legislative and economic work of the commonwealth. The public health and safety of our citizens is being more and more committed to our hands. Last summer, when our city was threatened by the invasion of a pestilence, the whole community looked to us for protection, and through the governing body of our nation's commerce, appealed to us for advice and guidance. Do you realize, gentlemen, how large a feeling of safety comes to the public on account of the presence of the Academy in the midst of our city? Let us act wisely and unselfishly in all matters pertaining to the public good.

In our first appeal, made to the profession and public to erect a new and more commodious Academy building, it was stated that our most pressing need was a suitable place for our library.

Expressive as they are, the figures which I have given you of the library are but lifeless proofs of the eloquent words spoken by Dr. Jacobi at the laying of the corner-stone, and with increased fervor at the opening of this building, were prophecies which are rapidly being fulfilled. The real influence of our library is in the intellectual development of our fellowship, which cannot be measured by figures, but must show itself in the more exhaustive and accurate work done by our members.

But it must be remembered that the cessation of growth is the beginning of degeneration. If we are to go forward, our library must not fall behind. Its endowment fund is now only $25,000. It should be increased at once to $100,000; with no less a sum can we keep pace with the present tropical growth of medical science.

That some of the large-minded men with ample means will soon discover their privilege is no longer a matter of hope but of certainty, for money in no other place can exert such a constantly widening influence for good as the increase of our library endowment fund to the sum of $100,000.

There are not a few in our midst to whom the entire sum seems small, and I would say to those who would share this honor and receive a monument of gratitude more enduring than marble, do not delay lest the opportunity be lost. The bronze in yonder tablet was bought for a few dollars, and on its face it simply says, "This man built a hall;" but let me say to those who hear or read these words, that this man's name will fall from reverent lips in tones of love and honor when all marble piles are ground to dust.

With our library fund raised to what it must be, our strength would be complete, for all the departments of medicine and surgery are now represented in our Sections, so that every Fellow can find a place among congenial workers for making public the results of his study under the sifting, but kindly, criticism of experts.

The plan by which our general meetings of the Academy each month is placed in charge of the Sections in rotation, thus representing to the Academy the special work being done in them, has not only added interest to the Academy meetings, but has developed a spirit of generous emulation under which all the work has become more systematic, and Sections that four years ago were indifferently attended, doing desultory work, have now become active and efficient parts of our organization. The fear that increase in the number of Sections would diminish interest in the general meetings has proven groundless, for the attendance at both the Academy and the Section meetings has increased rather than decreased.

These evidences of a broader and deeper scientific spirit give, doubtless, promise of better things to come. When we appreciate that no hampering debts can distract us from our higher purpose, we enter upon our future not only free from debt but full owners of a building worth $380,000, with furnishings representing $30,000, a growing library valued at $80,000, and invested funds over and above the $10,000 bonds still uncancelled, to the amount of $32,000, making a total of more than half a a million. With such a financial status and such a fellowship, the question comes to us to-night, What is the mission of the New York Academy of Medicine?

At the laying of the corner-stone of this building Mr. Cleveland said that "the nobility and sacred character of this mission will never lose its interest while humanity is touched with human woe; while self-sacrifice receives the homage of Christian hearts; while the suffering and

sorrows of our fellow-men start the tears of pity, nor while their alleviation brings comfort and satisfaction to the soul of sympathy." This broad and clear conception of our mission is from a layman's stand-point, but represents work done, not doing. For us the question is one of ways and means, of obligations that are individual and collective. To the individual Fellow we offer opportunities and means for a richer intellectual development and social culture, and justly demands that he use them for his own and our common good. No Fellow has a right to ignore this obligation of fellowship, for the Academy stands before the public for what its individual Fellows may be. For us obligations and rewards are reciprocal. Whoever shares in honors won by others is bound to make return to the best of his ability.

To everyone the first duty is a recognized connection with one or more of our Sections, a connection which imposes the obligation to attend its meetings when possible, to pursue studies and investigations that shall be worthy the attention of the Section, to give encouragement and support to fellow-members by serious and earnest consideration of the subjects they may present.

As an organized body we have no more imperative duty, or one requiring greater wisdom, patience, perseverance, and courage, than in organizing and harmonizing medical work. It is worse than folly to shut our eyes to the fact that so large a per cent. of medical work is done to fill time as well as space, as to become a matter of jest and sarcasm even among ourselves. It is worse than cowardice to confess the impossibility of doing enough good work to satisfy the demands of all our societies, and then make no effort to correct the wrong.

If I may still be permitted to offer one word of advice from this presidential chair, it would be this: That the foremost duty of this Academy to day, and the one offering in its completion the largest and most valuable returns to us and the profession, is the consolidation and concentration of the medical societies of this city. I do not say this because the many other societies are not doing good work—many of them are doing some of the best that is done, but I do say it because they and we are doing some bad work—because we need their good work as they need ours, and neither needs bad work. In these statements I do not, of course, include the County Society. It occupies a unique position, accomplishes results that we could not accomplish, and possesses functions that cannot be delegated. It and the Academy are complementary bodies. With this exception, then, I am convinced that consolidation of the many small societies with the Academy would be productive of the greatest good to all concerned; that it would do more to conserve energies, to eliminate work that in being bad is injurious as well as valueless; to establish higher ideals; to return more generous rewards for work done, and finally, to develop a stronger spirit of common brotherhood than any step which has been taken by the profession. I am unable to see any valid objections to such a union, unless a chartered society holds property accepted under specific restrictions.

The predominance of the social element, which has been advanced as an objection, appears to me a most cogent reason for taking such a step. The introduction of the social element to the regular monthly meetings of the Academy during the past two years, which was made possible by the liberality of some of our Fellows, has demonstrated that the value of the scientific work is enhanced rather than lessened, the discussion of the evening being frequently continued in the groups gathered about the tables. There can certainly be no objection to the addition of the social element, even to the Section meetings, whenever the members desire it, and thus fulfil all the claims of the social medical societies.

I cannot leave this chair of office without a word of tribute to the Fellows whom death has taken from us during the past four years; among them are three to whom this Academy will always owe a special debt of gratitude and respect, DuBois, Barker, Leaming, names which we cannot follow with the hackneyed phrase, "We mourn their loss." As men and friends the parting brought to each of us in varying measure the aching heart and weary sense of hopeless loss. But to this Academy they can never be lost. The story of their loyalty and devotion, their watchful care and self-sacrifice, their wise counsels and liberal support must continue to exert an influence on every Fellow who values an honorable name. We can pay them no loftier tribute of respect and appreciation than to say, "We do not miss them," for that is the test of a rounded life. We restore the borrowed garments to the earth from whence they came, and call them the man. Why do we thus deceive ourselves? That faithful canvas shows but the house where Barker tarried for a time. Those hands with woman's tender touch were only tools which did his bidding, and when the recreant voice gave halting service and laggard obedience, who thought to say his wit has dulled, his learning failed, his foresight dimmed, his counsel erred, his love grown cold.

These men did all that man can do. They did their part in life with faithful zeal until their powers gave way, and with that wisdom which never dwells in sordid minds they died, not to leave their mental wealth for legacies, but day by day transferred it to men with fresher strength, and so gave over, not gave up their work, content in the knowledge that it was not to cease, but grow larger year by year; and when at last their summons came, the best of all they had—the essence of the man, his quality—they left with us.

Why is it that we will not see the truth within this mystery of death? We whine in greedy selfishness, "No man will miss me when I die," and will not see the reason that stares us in the face—the useless man receives his share of being missed when living, and cannot ask for more; the man whose worth is sterling cannot be missed; the force, that is, the man, goes on. As we turn our faces to the front, then let us not forget these present, if unseen, Fellows, but made stronger in their influence, let us press forward with unfaltering courage and determination to make and share such measure of worth that we too shall not be missed.

Fellows of the Academy: Four years ago, when you honored me with the Presidency of this Academy I entered upon the duties of the office with a feeling of self-distrust. Two years ago, when you unanimously elected me to a second term, I felt grateful for the renewed expression of your confidence, but when a Fellow at the close of my second term nominated me for a third term, a feeling of pride came to me, for no greater honor could have been conferred upon me. In declining the nomination I realized that the time had come when the interests of the Academy would be best served by new energies, stimulated by a fresh enthusiasm. For all your patient courtesy and the many evidences of respect and confidence shown me during these years I give you my sincere thanks, with the feeling that another, and the most interesting, chapter of life's labor and waiting is ended.

The last and most pleasing duty now left to me, is to introduce my successor, Dr. B. St. John Roosa, who brings to the high office to which you have elected him great executive ability. His scientific attainments have already placed his name high in the list of our country's honored ones. Under all circumstances, he has the courage of his convictions, and believes that "the blood of the martyrs is the seed of the church." The energy and ability which Dr. Roosa has shown as President of other societies bears promise to the Academy of great successes in the near future.

From Reaumur to Centigrade.—The German Government has decided to generalize in the Fatherland the use of the Centigrade thermometer in place of that of Reaumur.

THE HIGH AIMS OF THE ACADEMY.[1]

By D. B. St. JOHN ROOSA, M.D., LL.D.,
PRESIDENT-ELECT OF THE NEW YORK ACADEMY OF MEDICINE.

GENTLEMEN, FELLOWS OF THE ACADEMY OF MEDICINE: I am deeply sensible of the honor conferred by an election to the Presidency of this Academy. I thank you sincerely for it. It will be my earnest endeavor to prove myself not entirely unworthy of the confidence displayed in me by the profession of this great city. The administration of the Academy, from simple beginnings, in small and almost unworthy quarters, has come to be an affair of more importance than it was in the days of its foundation. We are now in an abode worthy of the profession to which we belong, and there are nearly eight hundred members who may participate in its scientific and executive work. The growth of the Academy, like that of a good tree carefully planted by sturdy hands in a fertile soil, has been gradual but sure. A long line of illustrious names marks those who have thus far guided the work of this society. In the last two terms especially—those of Jacobi and Loomis—it has been the good fortune of the profession to see the realization, to a considerable extent, of the ideas of the founders. There have been great material advances in the partial endowment of the Academy, in the complete organization of the Sections, in the creation of the library, and, finally, in the erection of the new building. Indeed, the Sections have been so increased in number and so excited to new activity as to cause a fear occasionally expressed that the general meetings of the Academy may ultimately be neglected. If the sections are exciting more interest than the general meetings, it is probably only an unsymmetrical expansion of one part of the great structure which, in time, will be compensated for by additions on other sides. To-night, at least, we may congratulate ourselves that, owing to your labors as Fellows, and to your distinguished leadership, we have realized all that could have been reasonably expected at the organization in 1847.

To one reading the history of that organization it seems as if the Academy had been established when the heart of the profession was greatly stirred, when as it seemed to many, it was in imminent peril from the onslaughts of the various forms of quackery. Of these, homœopathy receives the most numerous mention in its history. The inaugural addresses of the first few years, contain many allusions that show that this was established as a place where the sheep were to be carefully separated from the goats, and heresy from the sound medical faith. This great subject was taken very seriously by our fathers, just as heresy in religious matters is taken in many other quarters to-day.

When the Academy was founded, the revolution of Continental Europe of 1848 was possibly in the air even of our city of New York, and as we had no immense political troubles, at least none involving our existence and form of government—the war with Mexico not having profoundly stirred us—our profession seems to have scented a great danger from afar, and to have provided a rallying-place against an iconoclastic enemy. That same Continental political storm brought to the Academy, by the way, one of its most illustrious members, the late Dr. Krackowizer, and if I mistake not, several other men, who have become eminent on these shores—one of them now an ex-President of the Academy. Be this as it may, in regard to the impregnation of the air with revolution, in reading our early history, one may almost hear the sound of the noisy preparations for building a great fortress, or imagine the hurried and whispered orders of the formation of a line of battle.

The inaugural address of the first President, Dr. John Stearns, whose portrait is upon our walls, and whose residence at that time was at 84 White Street, contains many eloquent passages in classical English, inveighing against impostures and innovations in medicine, and the doctrines taught by Hahnemann. Dr. Stearns took somewhat of a pessimistic view of the medical, as well as of the religious situation in 1847. He asks, "Do not the state of the public mind and the signs of the times, in both the religious and medical world, indicate an approaching period when it will be inscribed over the portals of the Halls of Science '*Ilium fuit?*'" His sincerity and honesty of purpose, no one who looks upon his face, as it beams upon us, or who reads his fervent peroration, can doubt. "Could I be sure," he says, "of the uninterrupted and enduring prosperity of the Academy in disseminating health, happiness, and the sustaining principles of life, I should die in peace, with effusions of gratitude and praise to Almighty God for His permanent blessings upon our labors." It is in no spirit of criticism of this eminent and honest man, that I have made these quotations. From his point of view, his anxieties and distress were well timed, and if he "builded better than he knew," in assisting in the establishment of this Academy, he was not unlike many others who have failed in scanning the horizon, to hail the coming dawn which was to illumine much that was to them in utter darkness. In our time we are no doubt making errors in some of our methods, but we have outlived the dread lest impostors, innovators, and theorists shall overwhelm the science of medicine. In that direction, at least, we have made progress, although for a short time at a comparatively recent period in the history of the Academy, it seemed as if heresy-hunting were to have a revival in the stormy scenes that have finally ended in the peaceable years of existence of our Academy, as a well-bred family without a book of etiquette, in the omission from our by-laws of any reference to a formulated code of ethics. Does any one of my auditors believe that we have been less ethical from this omission?

In looking over this list of the Presidents of the Academy I found that it has been my privilege to have personally known everyone of them, except the first, from whom I have just quoted: John W. Francis, Valentine Mott, the two Woods, Stevens, Cock, Joseph M. Smith, Parker, Batchelder, Watson, Anderson, Post, Bulkley, Peaslee, Barker, which brings the roll down to that of the living, Purple, Jacobi, and Loomis. With the memory of each one of these men, something arises in my mind to stimulate and encourage me in the performance of the duties which they, without exception, so admirably performed for their day and generation. Since I was a medical student, I have been in the occasional habit of attending these sessions, and I have happened to be present when some of the scenes were thrilling. I heard the arraignment of Dr. Horace Green, for what seemed like a charge of malpractice, when, like a wounded lion at bay, he stood up in the aisle of the chapel of the University, where the Academy then held its sessions, and bade defiance, with a serene and sad face, that I shall never forget, to those who were in all honesty, but, as I shall always think, improperly, accusing him. Among them was no less a person than the then venerable Valentine Mott, who, animated by a high sense of duty, was severely criticizing the work of a man, who has long since taken its place with those who have brought renown to American medicine. Then in 1861 I saw the great surgeon, whom we all love to speak of as Frank Hamilton, decorated with his brigade surgeon-major's straps, come in when there was a crowded meeting and stand along the wall of the same assembly-room, while he was on his way to the front, where he distinguished himself so gallantly, not only as a scientific medical officer, but as a brave man. In the hall of the Historical Society, I heard Marion Sims deliver his famous, epoch-making paper on "Silver Sutures in Surgery." But it is not an hour to indulge long in reminiscences, interesting as they may be. The Academy of Medicine having now come, thanks to the labors of my predecessors and their executive

[1] The Inaugural Address delivered at the meeting of the New York Academy of Medicine, January 19, 1893.

associates, to enlarged facilities and great prosperity, you naturally ask what work shall it continue to undertake that it may fitly represent the profession of this city and this county? To answer this question fully I am not at all competent, but I hope to throw out some suggestions as to the work that the Fellows and Officers may unitedly endeavor to perform.

Although named an Academy, this Association, as pointed out by Dr. Jacobi in his Inaugural Address, has no particular likeness to the French Academy of Medicine. It is not an association of a small number of selected wise men, who, in the leisure of advancing years, under favorable governmental patronage, devote themselves to scientific investigation and criticism of erudite medical theories, and who give authoritative decisions like a great high Court of Justice. In our country, medical institutions are usually unendowed, except by the private gifts of individuals, gifts to which they have usually been induced by the greater or less importunity of their family physician, and also, let it never be forgotten, by the legacies and donations such as those made to this Academy, in the Library of Purple and the money of Dubois and Farnham and Carpenter, of our own number. As befits our land, or, at least, as befits our present relations, as a profession, to the Government, it is a Republican Assemblage of chosen members of the Profession, who have at the least passed the years of pupilage in schools, but who are hard at work earning their bread in the sweat of their face, by struggling to lengthen life and mitigate disease. For the most part, if not entirely, the papers and the addresses that are prepared for this Academy are written in the hours stolen from the imperative duties of an urgent and exacting professional life. Without an exception, so far as I know, the Executive Officers of the Academy have been from this working class. Whatever more the future may demand in this great city, which is not only the commercial but the educational centre of this country, we now need for the cultivation of the science of medicine, just such a broad and Catholic organization as this, chosen from the working ranks of the profession, since an aspirant for membership must have been engaged "in active practice for the three years last preceding his application." It is a little more exclusive in its selection of members, but only a little more than the County Society, and a little more ambitious in its aspirations. The New York Academy of Medicine thus fitly supplements the great legally constituted Society, embracing such a large proportion of the profession, which also meets in these halls. If the need for a more select, and, if you please, higher type of organization ever arises, no doubt it will be supplied, but, at present, the Academy, I think you will agree with me in saying, comprehends about all that is necessary in addition to the other societies and the great medical educational institutions of New York, for the advancement of medical science among us.

One of the most important things to which it seems to me this Academy should devote itself, in the present and in the future, is to secure for the medical profession a more authoritative position in all bodies of influence, political or social, in sanitary and hygienic matters. As I read history, the medical profession has lost somewhat in its authority over the educated public and the authorities of the State, since the mortal schism of the few years preceding 1847. A wiser treatment of that wild protest against the proud orthodoxy of medical dogma, would have, perhaps, retained for us that which for so many years we have lost. It might have prevented us from being divided into what, however we may regard the division, the public at large have, until very lately, persisted in considering two sects. But this public, through the law-making powers, punished us for our quarrels by stripping us of the exclusive right that we had so long enjoyed of determining who should practise medicine within our borders, and how he should be qualified. The recent law, which happily, after years of contention, came upon the statute-books, and which has forced every person who wishes to practise medicine in this commonwealth to pass one examination, and thus all to have a common qualification, will, in time, if allowed to remain unimpaired, and if supplemented by our own wise labors, restore us to our former position as the arbiter of the hygienic and medical interests of the State.

During these years that physicians have been contending with each other, as to the credibility of dogmas and methods of practice, the profession has been gradually removed—with the notable exception of the army and navy of our country, where in all medical matters we still remain supreme—from the control of hospitals, Boards of Health, and from municipal commissions which look after great corrective and sanitary institutions. So far as I am informed, there are but two hospitals in this city, both comparatively small ones, where the profession has its due share of influence in the executive management. As we all know, it is utterly impossible to draw a line that shall separate that management from the proper care of the sick in these institutions. Of the Commissioners of Charities and Correction, three in number, one only is a physician. In the Board of Health there are two physicians, one being the Health Officer of the Port, always a political appointment; the other, thus far, always a representative member of this Academy, for whom we have never had occasion to blush. By one of the most extraordinary laws that it has ever been my fortune to have my attention called to, in a civilized country, a physician is prohibited from being the President of this Board.[1] I have not heard, as yet, of a law which says that a man having a military education at West Point shall not command the army, or that the admiral of the fleet shall have never been to sea, but, if this kind of legislation is persisted in, we may all live to see these things also made a part of the laws of the land. But this law does not seem peculiar to our fellow-citizens. But then they are not surprised that bankers and railway presidents and lawyers, often have the chief place in managing hospitals. It is only a few weeks ago that a highly honored citizen, formerly mayor of this city, eulogized this provision of the law as to the Board of Health, in a public address. From this we may learn something of the tenor of public opinion, and of the best public opinion, not that of ward politicians, but of statesmen, with regard to the relations of the public to the profession that this Academy assumes to represent.

Take another instance: the office of coroner is one that, by any fair consideration of the proprieties, belongs to us. It is only by the chances of political nominations that coroners ever have a medical education. There is nothing in public opinion or in the law that demands that they should be physicians; but the deputies, who do the work, except that of holding the peculiar courts that coroners sometimes hold, are graciously but of necessity taken from the medical profession. The important duties of these deputies are, I believe, usually very well performed, but considering the technical education demanded, by any fair comparison to what is paid for professional labor to our friends of the legal profession, they are meagrely rewarded. This condition of things has come upon us while we have been discussing matters which would right themselves. The fault that it has come belongs not to our fellow-citizens, but to ourselves. Proper respect is paid the medical profession in the household at all times. When danger of death is near, and in times of peril in the community, when an epidemic stares the city in the face, men who are glib—as glib as Molière—with gibes at the medical profession, are absolutely cringing in their desire to know what they shall do to be saved from death. Almost white with terror the lay members of a Board of Health then leave everything—forgetting for a while their politics—leave everything to the doctor. They know that in averting and arresting disease, they are as helpless as would be a landsman in charge of the engines and the sailing of an ocean

[1] Annual Address by Dr. Andrew H. Smith, 1887.

steamer on the North Atlantic. This condition of things in an hour of peril ought to exist in all matters pertaining to our profession in the time when, although the peril may not be seen, it is none the less imminent. I grant you that the chief work of this Academy is, naturally and properly, the scientific cultivation of the healing art, the promulgation of the discoveries made by educated experience, but having set these things forth, and being constantly in the habit of doing so, we must see to it that their being put into effect is not neglected. It is idle for us, immense in number and powerful in resources as a profession, as we are in this city, to be mere members of societies in which we promulgate doctrines of great importance to the public weal if we have no power to put our views into action.

But the ignorant or unscrupulous enemies of sanitary science and hygiene are not idle. Every year, in Albany, bills are being introduced that, if passed, would sap the foundation of the structure of sound medical learning, that has been, with so much pain and so much labor, in the face of so many difficulties, at last firmly laid by the medical profession of this State. Within the last few days a bill has been introduced, and I am sure you will share my chagrin when I tell you that this has been done by a member of our profession, who happens to be a member of the Legislature, which would, if passed, completely nullify the good effects of the statute now requiring a preliminary examination, before a person shall begin the study of medicine. This bill clearly proposes to allow the student to take any part of his three years of actual study in the medical college, to learn to read and write and spell. Only a few weeks ago, the Regents of the University, another public body having to do with our vital professional interests, in which we are scarcely represented, were assailed by a society, asking them to grant a charter to a medical college for medical missionaries. Such a college as was asked for, would make a laughing-stock of all our other laws; it would discourage our undergraduate medical colleges that are now seeking to reach the highest plane of medical instruction, and would do more harm to medical education than this Academy could accomplish in a decade. A committee should, I think, be organized, which with very little expenditure of time and money, could see what was being done, or what was being proposed in Albany, and, if improper, bring it to the light, where it would be soon overwhelmed with the confusion entailed by our opposition. The Board of Health is the child of this Academy. Its first president was an honored and distinguished surgeon, and one of our presidents—Willard Parker—but in the present political composition and methods of that board, the child could hardly be recognized by its own father.

We have recently elected our quota of delegates to our State Medical Society. That which has been accomplished for this State in medical legislation, and it is an important and essential work, has been done by that society single-handed and alone, while in the strictly technical work of our profession it will compare very favorably with any society in the land. The delegates from this Academy have hitherto borne their full part in that work. I venture to express the hope that the new delegation may accept their office with a due sense of its responsibility, and not fail to see that we perform our share of the duties of that illustrious Society. Through these delegates, and through a committee, if the Academy chooses to appoint one, we may co-operate with the Medical Society of the County, to maintain those of our laws that fitly represent our views, secure the repeal of the odious law in regard to the Presidency of the Board of Health, and perhaps, what is just now of the highest importance, influence legislation in the direction of perfecting our quarantine regulations, so that they may come under the direction of the general government, as your distinguished Special Committee has already advised the Chamber of Commerce, and from which, I believe, we await a full report to us. This opinion of your committee has also been publicly endorsed by two eminent Fellows of the Academy, Dr. Sayre and Dr. Thomas. There is no doubt that this report to the Chamber of Commerce has been received with great consideration, and we have good reason to hope that wise legislation which shall do much to remove our quarantine from the arena of partisan politics and to save our country from epidemics, will be the result of this timely work.

Just such a situation with regard to the anticipated visitation of epidemic cholera once confronted this city, at the time of the delivery of the inaugural address of the President. This was in 1849, when Valentine Mott had just been elected for the first time; he was again president in 1857. Dr. Mott says: "Unquestionably, the prophylactic, or preventive treatment, is that upon which we should rely with most confidence. . . . As vices, crimes, and evils everywhere, when they reach a certain point, seem providentially to generate of themselves or suggest their own antidote, so we have here, in the spread of Asiatic cholera, a key or clue furnished which may be converted into a remedial measure of incalculable importance." Dr. Mott then goes on to argue against the crowding of human beings in filthy dwellings, but what I wish especially to quote to you at this time, is this: "Long before the warm season comes upon us, therefore, gentlemen, it should be our bounden and constant duty to impress upon our fellow citizens the absolute necessity of their thorough cleansing, ventilating, and disinfecting processes." He then goes on to speak of depopulation and temporary sequestration of the inhabitants of this city. The warning that Dr. Mott sounded when New York had a half million of inhabitants, we may well, in the face of what is happening in Hamburg now, and what happened in our harbor and city last autumn, repeat here, so that it may be heard by two millions of people vitally interested, lest an epidemic of cholera reach us in the summer of 1893

The other means by which this Academy may advance the interests of science are well known to you and practised by you. Here the papers are to be read, the demonstrations made, the discussions held, which testify to our interest and progress in the healing art. At the beginning of my service for you, may I, even if in repetition of what has been better said by some of my predecessors, be allowed a few words as to what the Academy seems to desire in the matter of technical contributions.

This is no place for long and dreary quotations from Germans, Frenchmen, or even Englishmen, with no additions thereto of original ideas on the part of the writer. Leave us, I pray you, in the calm and quiet of the late evening hours, in our libraries, to read by ourselves such *résumés* of what is being done on the other side of the Atlantic. They are published in the medical journals and are very accessible. A man or a woman who claims such a rostrum as this, ought to have something new to say, and he ought not to consume too many minutes in saying it. He may assume that his auditors are tolerably familiar with what has been done by others, on the subject of which he writes. What we are chiefly anxious to know is, wherein has the man or woman before us added to the knowledge of the world? How does he advise us to increase our usefulness? Besides the facilities afforded by the medical journals, the well-attended Sections of the Academy will allow of much more extended speech and quotation and discussion of foreign opinions, than is proper here. This reading desk should be sacred to the promotion of new ideas. The days when medical literature in New York consisted of a few notes from an English text-book, and a translation of a French and German treatise are passed, not to return, unless cerebral softening should simultaneously attack all the physicians who are Fellows of the Academy.

It was the aim of the architect of this building to so build it, for thus he was instructed that there should be rooms in it devoted to social intercourse among the Fellows of the Academy. The smoking-room and dining-

room are especially designed for this purpose. Perhaps we have not been here long enough to fully realize this idea of a medical club associated with a scientific body; but those who advised the architect, I am sure, remain very anxious to see the social amenities fully cultivated among us. The power of such an association—good acquaintance, the informal exchange of ideas belonging to it—ought not to be lightly regarded. The library, every year growing into more usefulness, is free to all members of the profession, or to any who desires to make any proper use of it; but the club feature ought, in my opinion, to be fully established and to be reserved for those who, by their continued payment of the dues deserve extra privileges. Let us assemble ourselves together not only as scientific physicians but also in good fellowship as brothermen.

This Academy was founded for the purpose of the advancement of medical science, and as we have determined by our broad constitution, "by such means as shall appear to its managers to be expedient and proper." There are some who take a semi-monastic view of the life of members of the medical profession. They would have us entirely absorbed in the treatment of disease, as it comes before us in the care of the patients of which we have the responsibility. Their discussions would be merely those interesting to their fellows in little circles, met to consider the local progress of scarlet fever, measles, diphtheria, typhoid fever, and so forth. This narrow view has never been held by the Fellows of this learned body. The advancement of medical science comprehends, as we well know, everything that can possibly be done for the hygienic welfare of the community. In all this, the Academy is bound to have a serious interest, and to promote it to take active steps, as occasion may require. There are those who seem to have a horror of the least publicity on the part of the work of the profession—that publicity which naturally and properly comes to the other learned professions. While I am in complete sympathy with those who abhor the publication of anything that may have for its object an advertisement of the skill or wisdom of the individual, on the other hand, I consider it of the greatest importance that we should make our work, as the sanitary guardians of the commonwealth, as widely known as may be demanded by the necessities of our time. If it be not well known, how is it possible to cause it to exert any influence? It is to be always assumed that the interests of the public are the same as those of the profession. The timid souls who distrust all progress that is made through publicity, contest, and struggle, may be divided into two classes, those so fond of their own ease that they can bear nothing which disturbs it, and those enjoying that to which they have no right, at the expense of the public they ought to serve, and who wish to be let alone in their ill-gotten position. Personal contention, backbiting, malicious aspersions, are matters which are certainly far from the mind of any man who is a true member of a noble profession, but contention for a good cause, for a needed reform, if in a proper spirit, although vigorous, if the contention be against the fault and not against those who commit it, should never be avoided, when it stands in the way of progress in the right. First "pure, then peaceable." As to expediency, of which so much is said, by those who would delay reforms and retard progress, we may say with Bishop Whately, "Nothing but the right can ever be expedient, since that can never be true expediency which would sacrifice a greater good to a less." This is a vast field opening out to us as Fellows of this Academy. It never can be properly occupied unless by the personal endeavor and the personal loyalty of each one of us who is here associated. That personal endeavor, must be, as far as it lays in our power, to advance the great interest which we represent, and through which we shall be, in some measure, benefactors of our time. This will enable us to plant this profession firmly and securely in the affections and the respect of the community. Acting in this spirit we shall, successfully, under God, resist any attacks upon our integrity:

> "For self-dependent power can time defy,
> As rocks resist the billows and the sky."

Progress of Medical Science.

The Different Forms of Cardiac Pain.—Dr. Chew states that "cardiac pain," or "pain in the heart," is found as a concomitant in three different conditions: Angina pectoris; any condition which brings about an obstruction or resistance to the flow of blood through the arterioles, such as an arterio-sclerosis; and third, cardiac dilatation. When these three forms of disease are considered together, and an endeavor made to co-ordinate them as to their cause, it is quite possible that the chief factor in the production of pain common to all of them is pressure brought to bear upon the cardiac nerves or upon the cardiac ganglia themselves. The connection between these ganglia and the cervical and brachial plexuses give a ready explanation of the extension of the pain to the arms that may occur in any form of cardiac pain. In the first, or strictly paroxysmal form, true angina, the pressure may be occasioned by the sudden tension of the arterioles; in the second form by the general sclerotic condition of the vessels; and in the third form with dilatation of the heart, by the attenuation of the heart-walls. —*Medical News.*

Transitory Dulness at the Apices of the Lung.—Dr. Koenig has noticed frequently a marked dulness at the apices of the lung unaccompanied by auscultatory signs, in cases which later at autopsy presented nothing abnormal in the lung. (*The Boston Medical and Surgical Journal.*) This occurs nearly always in persons suffering from some exhausting disease, and is often so marked as to be very misleading. As it often happens that in incipient phthisis dulness on percussion is the only suspicious physical sign, it must be borne in mind that a diagnosis should not be made from this alone without careful study. The explanation, the author believes, is to be found in the incomplete filling of the apices of the lungs with air, and occurs especially in patients who have lain in bed for some time. Such patients are, however, not the only ones in which he has noticed this condition, but except in such patients he has seen it only in women and among hospital patients. Cases are given, in which it occurred in connection with typhoid fever and influenza.

Tumors of the Heart.—Dr. Jürgens has observed four cases of tumor of the heart. The first case was one of a round fibroma about the size of a cherry, occurring in the right auricle of a child of ten months. At several spots of the endocardium of both ventricles there existed diffuse, somewhat strongly-marked thickenings, which perhaps arose at the same time and might be referred to the same causes as the fibroma. The second case was that of a polypoid fibro-myxoma of the left auricle, in a workman fifty years of age, who died of gastric carcinoma. The tumor almost completely closed the mitral orifice. The non existence of hypertrophy of the right heart, and the slight clinical symptoms, were remarkable. The pedicle contained striated muscular fibres which had their origin in the auricular wall, and through the strain were dragged into the pedicle. The third case was a fibro-sarcoma of the right auricle in a man thirty-six years of age, which had reached over to the tricuspid valve and its chordæ tendineæ. Death occurred suddenly. Further details could not be obtained. Other tumors were not found. The fourth case showed numerous gummy nodules in the right ventricular wall of a girl nineteen years of age. Death occurred suddenly without previous illness, and there was a suspicion of poisoning. An autopsy revealed a complete infiltration of the myocardium with gummy tumors the size of peas.—*Centralblatt für Klinische Medicin.*

MEDICAL RECORD:

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THE NATIONAL QUARANTINE BILL.

THE discussion in the Senate on the Quarantine Bill, of which we spoke approvingly in our last issue, presents some points deserving of notice, as showing the trend of Congressional thought and opinion on matters pertaining to the public health.

The bill was introduced last March, and was reported in December. It was entitled, "A Bill Granting Additional Quarantine Powers and Imposing Additional Duties upon the Marine Hospital Service." In the original bill that Service was mentioned by name seventeen times, but when it emerged from the Committee of the Whole, the term "Secretary of the Treasury" had displaced it in fifteen places. This substitution of the "Secretary of the Treasury" for the "Marine Hospital Service" should have changed the title of the bill so as to read, "A Bill Granting Additional Quarantine Powers and Imposing Additional Duties upon the Secretary of the Treasury." The occasion of this change appears in the debate to have been due to the fact that the Surgeon-General of the Marine Hospital Service is a subordinate in the Treasury Department. There is also apparent a disposition to ignore the Marine Hospital Service because of its scientific character. One Senator expressed great contempt for "scientific people," and, to prove that they are mere alarmists, cited the failure of Beila's comet "to crush us into smithereens," according to the prediction of scientists. He referred to Great Britain, France, and Germany as countries which are not "stampeded" by the fear of cholera, quite ignorant of the fact that those nations have thoroughly organized boards of scientists, who, by their wise and timely application of sanitary measures, protect the people not only from such pestilences as cholera, but also from panic. We trust better counsels will prevail in the House, and that the original form of the bill as regards the position of the Marine Hospital Service will be restored.

The bill, as reported by the Committee on Epidemics, had two important amendments added in the form of sections. They show the influence of last summer's experience on the members of the Committee. The first section added, Sec. 6 of the bill, empowers the Secretary of the Treasury to remand infected vessels to quarantine, as follows: 1. If the port of arrival is not provided with proper facilities for treatment, to the nearest national or other quarantine capable of treating the vessel. 2. If the port is provided with a suitable quarantine, to that establishment. The value of that amendment lies in the safeguard which it creates at those ports, chiefly, which are destitute of quarantine facilities. They are more numerous on the South Atlantic and Gulf coasts. The second section, Sec. 7, empowers the President to suspend immigration as a defensive measure against the importation of contagious diseases. In our entire failure to organize and perfect a system of adequate sanitary defences, it may occasionally be necessary to resort to the antiquated measure of non-intercourse to protect the country against an invasion of an epidemic. But such a law is a sad acknowledgment of the failure of our national legislature to appreciate the progress which has latterly been made in sanitary administration.

One of the chief points of discussion was the relation of the national and local authorities in the management of quarantines, but no satisfactory solution of the question was reached. The bill was evidently drawn to answer the nearly universal demand for a national quarantine, and at the same time to preserve the status of existing State and municipal quarantines. The method of accomplishing this twofold result is ingenious, but it will prove ineffectual and should not be attempted. If an effort is made to carry out the provisions of this bill in that respect, the same (or even a more serious) conflict will arise between the national and local authorities than confronted the National Board of Health while working on the same lines. The Secretary of the Treasury cannot make and enforce rules and regulations within the local quarantine jurisdiction of ports like New York, Boston, and New Orleans, without at once provoking a controversy that will prove disastrous. The only national quarantine possible at such ports must be established outside of the local quarantine area. This can and should be the method of extending the national system, unless Congress has the courage to create at once a complete national quarantine and abolish all local quarantines. We believe that the better policy to pursue is for Congress to create quarantine districts in each of which, at suitable points for the convenience of vessels, a fully equipped quarantine is constantly maintained, in perfect efficiency, for the treatment of infected vessels bound to any ports in that district. Meantime let each State or seaport municipality maintain its local quarantine or port sanitary inspection and its quarantine establishment. These two lines of quarantine defences will be maintained throughout our whole seaboard, and no conflict of authority could accrue.

A defect in the draft of the bill renders it inoperative at the New York quarantine. It provides "that the Secretary of the Treasury shall co-operate with and aid State and municipal boards of health, etc." The New York quarantine being under a Health Officer, it could not receive the aid of the national government.

Malaria in Eastern Massachusetts.—For the past eight or nine years malaria has been developing in and about Boston. Dr. C. W. Townshend has collected reports of 207 cases occurring since January, 1892. Half of these were in Boston. A good many cases occur in Cambridge, Brookline, and Newton.

THE ST. LOUIS EPIDEMIC.

Our sceptical brethren of St. Louis having first denied the statement that the city water-supply was contaminated and the cause of an epidemic of typhoid fever, now question whether it was typhoid fever after all (*Weekly Medical Review*). One authority thinks that the disease was "synochal fever," whatever that may be; the *Review* is convinced that it was nothing but "stercoræmia." We do not know exactly what stercoræmia is in St. Louis, but it suggests a painful prevalence of constipation and a deplorable susceptibility to fecal absorption among the good citizens of the great Mississippi town. We should suggest a more generous vegetable diet, and a more conscientious use, if needed, of Lady Webster pills.

AN EPILEPTIC COLONY IN NEW YORK.

The Legislature of New York last year enacted a law making the State Board of Charities a commission to select a site and prepare plans for a colony of epileptics. This commission has made its report. They recommend that

"There should be established in Livingston County, in this State, a colony for epileptics, to be known as the Sonyea Colony.

There should be excluded from the colony, at least in its beginnings and formative stages, all insane epileptics.

The objects should be to secure a community for the humane, curative, scientific, and economical treatment and care of epileptics, exclusive of insane epileptics; to fulfil which design there should be provided, among other things, a tract of fertile and productive land, in a healthful situation, with an abundant supply of wholesome water, sufficient means for drainage and disposal of sewage, and sanitary conditions; and there should be furnished, among other necessary structures, cottages for dormitory and domiciliary uses, buildings for an infirmary, a schoolhouse, and a chapel, workshops for the proper teaching and productive prosecution of trades and industries—all of which structures should be substantial and attractive, but plain, and moderate in cost, and arranged on the colony or village plan.

There should be a board of nine managers of the Sonyea Colony, appointed by the Governor, by and with the advice and consent of the Senate. The full term of office of each appointed manager should be eight years, after the first appointments; and the term of office of one of such managers should expire annually.

The Board of Managers is instructed to acquire title to a tract of land of 1,800 acres lately occupied by the United Society of Christian Believers, and situated in Groveland. The sum authorized therefor is $125,000. The land already contains buildings which can be made use of, and the work of the colony is to be commenced with as little delay as possible. The sum of $150,000 is to be appropriated, of which $125,000 is to be used for the purchase of the land as described. Further sums for the maintenance of the colony are to be appropriated yearly in amounts as needed.

The Commission say that

"The direct effect of the establishment of the colony would be the relief of a numerous class of sufferers, of which there are over five hundred in the almshouses of the State, and as many thousands in the families of the relatively poor and indigent.

"The indirect results of proper provisions for the medical treatment and education of epileptics, and their employment in the profitable prosecution of trades and industries and agricultural labors in colony life, would be to remove from the almshouses duties which they cannot discharge; and to release poor and indigent families from their tendencies to become dependent upon charity, on account of their infirm members; and thus to promote a wise and true economy and public policy in the prevention of pauperism."

The Board of Managers is to contain two physicians and one or two women.

RENAL DISEASE AND INSANITY.

Dr. Bondurant, of Alabama, has attempted to throw some light on the question of Bright's disease and insanity, through statistical data supplied by the superintendents of hospitals and asylums for the insane. Recent writers on the subject, such as Christian, Bennett, and Tuttle, appear to agree that Bright's disease is very common among the insane, and is in some cases directly responsible for the perverted brain action. Writing in the *Journal of Mental and Nervous Diseases*, November, 1892, Dr. Bondurant states that, though much has been accomplished by these workers, it is still evident that the matter is not receiving at the hands of the medical corps of our institutions for the treatment of the insane that attention which its far-reaching importance would seem to merit.

From his personal experience and studies of statistics on this subject the author reasons out that, "any pathological process possessing the potency of renal disease in inducing tissue malnutrition would exert an equal influence in the genesis of mental aberration; but when the supreme importance of the kidney as an organ of elimination is considered, it will be readily seen that its diseased states are most especially liable to be followed by contamination of the nutritive current." It seems to him not improbable that the psychic manifestations of other maladies—fevers, tuberculosis, etc.—are due, in part at least, to retention of the products of disease and tissue waste by reason of failure on the part of the kidneys to perform their full duty.

The author admits, however, that it cannot in many instances be proven that disease of the kidney is the primary lesion in cases showing mental alienation. In some at least, the renal disease and cerebral disorder are concurrent effects of a common cause; and in the arterio-sclerotic forms disease of the cerebral arteries enters as a complicating factor. It nevertheless appears reasonable to suppose that, whenever fully established and whatever its nature, the existence of kidney disease with the consequent interference with the function of the gland, cannot but exert a modifying influence upon the mental state of the individual.

In regard to the particular form of mental disturbance most commonly found to be associated with renal mischief, figures show that it is melancholia. Furthermore, it would appear that kidney disease of rapid development may lead to some form of maniacal excitement, whereas

pathological processes of slow and insidious development are apt to be accompanied by depressive neuroses. If this opinion, expressed by Dr. Batty Tuke, be accepted as even partially true, the great preponderance of chronic nephritis affords a rational explanation of the frequency of melancholia in such cases. But Dr. Bondurant adds the qualifying statement that, it is to be borne in mind that it is not in melancholia alone that renal disease is found. It is frequent in acute maniacal excitement, and well-nigh universal in puerperal, opium, and alcoholic cases, whatever form the mental symptoms assume.

On the whole there is little doubt that, if renal disease is not directly responsible for a large number of cases of mental disturbance, it is at all events sufficiently often a complicating factor to merit serious attention. For this reason the systematic examination of the urine of insane patients should never be omitted.

REPORTS ON PARESIS.

Interesting records of the coexistence of paresis and locomotor ataxia are to be found in various French journals of the present year. Raymond endeavors to establish a close relation between the major spinal sclerosis known as tabes, and general progressive paralysis of the insane. He considers these conditions similar in kind and identical in essence. Needless to say, this view has provoked violent discussion. Ballet affirms that no instance of these two diseases united in the same person has ever come under his observation, though he has seen paretic symptoms precede those of tabes. Locomotor ataxia (spinal) requires fifteen or twenty years for its whole course. Paresis (cerebral) may be fully developed in three months. Tabetic lesions begin preferably in the axis cylinder; tabetic lesions are essentially perivascular. Joffroy inclines to the opinion that in paresis the point of pathological departure is in the cells and axis cylinders of the cerebral substance. The union of tabes and paresis he looks upon as a mere coincidence, as multiple sclerosis, hysteria, and various neuroses are also sometimes associated with paresis. In the *Gazette Médicale de Paris*, May 28, 1892, Muselier, in a critical review of the subject, calls attention to the fact that the etiology is frequently the same in both cases, and that histological demonstration may later prove the identity in essentials of paresis and tabes, a theory that simplifies matters even when accepted provisionally.

Fifty-two carefully recorded cases furnish the substance of Evard's "Contribution to the Study of the Etiology of General Paralysis," of which a preliminary is published in the *Gazette Médicale de Paris*, February 13, 1892. The most frequent causes are congestions and conditions that predispose to congestion. The second and occasional cause is alcoholism; the third, syphilis. Charcot considers alcoholism and syphilis merely exciting causes in persons predisposed by heredity to vaso-motor and trophic disturbances. Diseases like inebriety and syphilis in parents may produce the paretic constitution in their offspring, and thus induce paresis. In this way are explained the eight recorded cases of adolescent general paralysis or diffuse meningo-encephalitis. Paresis in women resembles that of children, and is manifested physically in both instances as primary dementia.

Observations by Klippel in the *Revue de Médecine*, April 10, 1892, give the three forms of paresis that may appear in lithæmic subjects. First, there is the pure classic type; then the classic type with other lesions (atheroma, etc.) that produce secondary symptoms; and a third form, a pseudo-paresis, in which the syndrome is brought about by lesions distinctly different from the classic type. Diffuse inflammation is replaced by fatty degeneration of the capillaries and the nerve-elements.

Salgó (*Centralb. f. Nervenh. u. Psych.*, 1891) considers the duration of paresis, and recognizes four different forms of the disease, each classified according to the nature of its stages and general course. The first is the *foudroyant* form, identical with certain rapid and fatal cases of amentia. The second is depressive and hypochondriacal, somewhat similar to the foregoing in duration. Death occurs early through refusal of food. The third form is characterized by a longer duration of amenomania, delusions of grandeur, and a more regular general course. Remissions are frequent, thus increasing the duration of the disease. The fourth is that form of paresis having longest duration, in which dementia and paralytic symptoms show parallel development, and in which there are no delusions and no ideas of grandeur. Such cases are common, never dangerous, and can easily be cared for at home. They present the typical course of paresis, in which clinical facts are confirmed by autopsy.

"SWEATING" THE DOCTORS.

Dr. Leslie Phillips, of London, has brought out a good many facts to show that the so-called club system of providing medical attendance is in many cases a practical application of the "sweating" process to medical men. The method employed in England is somewhat as follows: Some enterprising individual calls himself the "Medical Aid Company," or some such name; he hires the cheapest doctor-article which the medical market can produce, at a salary, to attend the "Aid" patients, and he also hires a dozen or twenty touts who are paid by commission to obtain club members; and these touts invade the practice of the local practitioners, and use every persuasion to entrap contributors to the Company. By the margin between the yield of the subscription list and the hire of the doctor, the person who calls himself the Medical Aid Company manages to live and grow rich. He, *i.e.*, the Company, gets two cents a week or about $1 a year for each patient, and the doctor is paid 75 cents a year. The clubs sometimes number 2,000 members, so that the Company gets quite a respectable income. The doctors get their share of the profits at the rate mentioned. There is nothing quite so bad as this in this country yet, but the "club" system here is as a rule unsatisfactory and unjust, both to patient and physician.

Doctors and Newspapers in San Francisco.—The San Francisco County Medical Society has adopted a resolution, "That any member of this Society whose name shall appear in the daily press, describing his professional powers in an unprofessional manner, and who cannot give a satisfactory explanation of the same, shall at the next meeting be expelled from the Society." The Society recently punished four members.

News of the Week.

Excessive Cholera Mortality in India.—The *Indian Medical Record* shows a terrible record of deaths from that disease. In fourteen years, from 1877 to 1890, it declares that 1,000,826 persons have died in Bengal from cholera alone.

Women Medical Students not Wanted.—The Faculty of the Columbian University in Washington have withdrawn the privileges previously offered to women in the medical department. The reason assigned is that the presence of women as students kept men away, and they had no desire to become a female seminary. They also considered that the teaching of men and women together was demoralizing to both.

Protection against "Dead Beats."—In Pittsburg the doctors engaged for midwifery cases supply their clients with the following card, says Dr. Duff, in the *American Gynecological Journal*, such a card having been adopted by the Pittsburg South Side Physicians' Association:

STUB.	OBSTETRIC ENGAGEMENT CARD.
Engaged.....	PITTSBURG, Nov. 14, 1892.
Expected.....	Mr. John Jones, No. 3848 Carson Street, 40th Ward, has this day engaged me to attend his wife in confinement, which is expected about Dec. 1, 1892.
Name.....	JOHN MILTON DUFF, M.D.
Occupation.....	RULE OF SOUTH SIDE PHYSICIANS.
Residence.....	If the physician engaged cannot be secured at the time he is needed, this card must be presented to any other physician called upon, to warrant his attendance.
Name of wife.....	All cases of midwifery cash.
Remarks.....	
.....	
....	

The card is a protection against "dead beats," and is a guarantee to any physician who may be called in the absence of the expected attendant that the case is a worthy one. When the preliminary visit is made to the patient the physician should write upon the reverse side of this card the results of his examination; then, if another physician should have to be called in his absence, he will have the benefit of the knowledge thus imparted.

Illegitimacy in Great Britain.—Statistics concerning illegitimacy, published by Dr. Albert Leffingwell, show that in the matter of sexual morality the Irish are superior to all other peoples. The ratio of illegitimate births among the Irish is only 26 per 1,000, among the English 48 per 1,000, and among the Scotch 82 per 1,000. Next to the Irish come the Russians, with 28 per 1,000, the Dutch have 32 per 1,000, the Italians 74 per 1,000, the French 82, or the same as the Scotch. In Sweden, Saxony, and Bavaria the rate is still higher, and ranges from 100 to 140 per 1,000. Austria is at the opposite pole from Ireland with 146 per 1,000. Dr. Leffingwell discusses the accredited causes of illegitimacy, for example, poverty, ignorance, and the contamination of great cities, but only to find that these statistics belie them all. Ireland, for example, is one of the poorest countries; Russia is not only a poor, but an extremely ignorant country. The influence of great cities appears to be equally fallacious. Neither education nor religious creed account for the facts. Scotland, for example, is a very highly-educated country; Italy and Austria are Catholic as well as Ireland. Dr. Leffingwell comes to the conclusion that race and heredity, the marriage laws, social usage, and similar circumstances are important factors in the case.

The Bank-note Bacillus.—This is the name of a new variety of microbe, thriving, according to a British bacteriologist, on notes of the Bank of England. He believes that a deadly and sure medium for the migration of bacteria is the bank-note of small denomination. Some foreign notes were "experimented" on, and in two cases nineteen thousand microbes were discovered vegetating on a single note. Among them were identified microbes of tuberculosis, diphtheria, and scarlatina. The great majority of the microbes belonged to a peculiar type which, it is suggested, should be called the Bank-note Bacillus. If notes of small denomination are particularly dangerous, physicians in future will refuse to handle anything less than a ten-dollar bill.

Examinations for the Medical Department of the United States Army.—We learn from reliable authority that the statement that has appeared in several papers and journals, including this, in regard to the examinations in October last in New York City, was incorrect. Twenty-two was the number who received invitations, but eighteen only presented themselves. This number was reduced to fifteen by failures to reach the physical standard, so that but fifteen were actually examined professionally. The number of successful candidates, four, was correctly reported.

The Cincinnati Obstetrical Society at its annual meeting, held at the office of Dr. Reamy, the 12th inst., elected the following officers: *President*, Dr. Wm. H. Taylor; *Vice-president*, Dr. John M. Witherow; *Secretary*, Dr. E. S. McKee; *Corresponding Secretary*, Dr. Julia W. Carpenter; *Treasurer and Librarian*, Dr. George E. Jones.

A New Medical Specialty has been developed in Cincinnati. One of her doctors is secretary of three medical societies and two medical colleges.

Profit and Pleasure.—As economists, Cincinnati doctors are a success. They entertained the Ohio State Medical Society in May, and had a surplus of $600; also the Mississippi Valley Medical Association in October, and have a surplus of $900.

The Ohio Medical Journal is out with the new year in a new dress. It looks as though it were recovering from an attack of scarlet fever.

Tellurate of Potassium is recommended as an efficient remedy for the night sweats of phthisis by Dr. Edmund Neusser, of Vienna.

To Instruct the Letter-carrier.—The *Medical Progress*, of Louisville, says that it recently received a report of a number of cases of intubation performed by physicians in that city. The report was written out on a postal card in type-writing.

Tuberculin.—Dr. Domingos Freire, of Rio Janeiro, has recently made a report to the Brazilian Ministry of the Interior concerning the value of Koch's method of treating tuberculosis. His conclusions are those of the rest of the world, and are opposed to the employment of tuberculin.

"The Medical Week" is the title of the English edition of *La Semaine Médicale*, published in Paris.

Railway Accidents in the United States.—According to the Report of the Interstate Commerce Commission the following were the railroad casualties for the year ending June 30, 1891: The number killed during the year was 7,029, and the number injured was 33,881. Of these totals the number of employees killed was 2,660, and the number injured was 26,140. The number of passengers killed was 293, and the number injured was 2,972. A classification of casualties according to the kind of accident shows that 415 employees were killed and 9,431 injured while coupling and uncoupling cars; 598 were killed and 3,191 injured by falling from trains and engines; 78 were killed and 412 were injured from overhead obstructions; 303 were killed and 1,550 were injured in collisions; 206 were killed and 919 were injured from derailment of trains; 57 were killed and 319 were injured from accidents to trains other than collisions and derailments already mentioned; 20 were killed and 50 injured at highway crossings; 127 were killed and 1,427 were injured at stations; the balance, which makes up the total of 2,660 killed and 26,140 injured, is due to accidents which do not naturally fall in the classification adopted for report. Referring to passengers, 59 were killed and 623 injured by collisions; 49 were killed and 837 injured by derailments; 2 were killed and 34 injured by other train accidents; the balance, making up a total of 293 killed and 2,972 injured, being assignable to accidents at highway crossings and at stations, and to other kinds of accidents. Not only is the number of accidents of the year covered by this report greater than that of previous years, but, when compared with the increase in employees, it is observed that it is relatively greater than that of the previous year. Thus, during the year ending June 30, 1891, 1 employee was killed for every 296 employees, and 1 employee injured for every 30 men in railway service. The corresponding figures for the previous year are: 1 man killed for every 306 employees, and 1 man injured for every 33 employees.—*Medical News.*

A Cure for Actinomycosis.—Secretary Rusk has received from Dr. Salmon, Chief of the Bureau of Animal Industry, a report on the experiments and investigations being made in Chicago in the treatment of cattle for actinomycosis, or "lumpy jaw." The report concludes that the remedy tried—iodide of potassium—is a remarkable success, sixty-three per cent. of the cattle treated having been cured. The greater part of these were very seriously affected when taken for treatment. The report shows the cost of the treatment to be trifling by comparison with the results, and it is also proved that the disease is not contagious, twenty-one head of healthy cattle having been confined in close quarters with the diseased cattle for three months without showing any signs of being infected.

Trouble in a Brooklyn Hospital.—At a recent meeting of the trustees of the Homœopathic Hospital and Training School for Nurses in Brooklyn a resolution was adopted requesting all the members of the medical and surgical staff of the institution to forward their resignations, to be accepted or held over as might be determined upon. Gen. John B. Woodward, Lowell M. Palmer, and Dr. Jarvie were appointed a committee of the trustees to receive the resignations. Nine of the hospital staff have refused to resign, and say: "The hospital affairs present this singular and almost incredible anomaly. A body of medical men of unblemished character and high standing in the community, who have labored in the institution, many of them since its foundation, who have given their time, knowledge, skill, and money to a large extent, when compared with their means, who have done nothing to bring reproach upon the hospital, and much to honor it; and these men those in authority in the hospital are frowning upon, discrediting their motives, misinterpreting their acts, and, in many ways, in public and in private, endeavoring to oppose and suppress. To crown all, they now demand their resignations upon insufficient and incomprehensible grounds. With equal zeal these same authorities uphold, sustain, honor, and promote, both in public and in private, the individuals whose conduct has brought the trouble to the hospital and the character of which can be judged from the testimony already published and from the foregoing facts." According to reports, a woman is at the bottom of the trouble.

Cholera.—The continued appearance of cases of cholera over such a wide area in Russia, Poland, Germany, and France sufficiently indicates the extent of distribution of the disease and naturally gives rise to disquieting apprehensions as to the probability of its still further extension and manifestation in epidemic force during next year. The cold weather—and it appears to have been extremely cold of late in Northern Europe and on the Continent generally—has no doubt greatly checked, but it has not destroyed, the disease.

The official statistics recently published at Berlin, show that 8,510 persons have died of cholera in Germany during the epidemic. In the city and state of Hamburg, where it prevailed most severely, the deaths were 7,614, equal to about one hundred and twenty-two per cent. of the population. The number of deaths in Prussia was 892.

One of the remarkable and significant peculiarities of cholera has been frequently exhibited during the progress of the present epidemic. We allude to the localization of the disease, its persistent adherence to places, districts, streets, or individual houses. The occurrence of more than one case or of several cases in succession in the same house or locality, and sometimes with considerable intervals of time between them, has been frequently noticed. It was from observing this that the Indian practice of immediately evacuating an infected house or locality was adopted and followed with such success in that country. Low-lying sites, moisture, proximity to rivers and the outfall of sewers, and overcrowding of houses or population have also been influential factors in the incidence and spread of the disease, and as regards its importation it has frequently happened on searching investigation that cholera which was said to have been imported into a place at a given date has turned out to have been already there.—*The Lancet.*

Dr. Fessenden N. Otis, of this city, was in Tokio, Japan, last autumn, and the *Japan Mail* says that he was shown unusual courtesies at the time of his visit. Entertained at the famous Maple Club, he also lectured by invitation before several most distinguished medical

audiences in the capital. At the Red Cross, Charity, and Army Hospitals he received a warm welcome, and gave interesting demonstrations at the two last institutions. Among the large number present at the Maple Club to entertain the visitor, were court physicians, the surgeons-general of the army and navy, medical members of the Diet, the Directors of the Sanitary Bureau and the medical department of the University, and many other prominent members of the profession. Out of compliment to Dr. Otis and in appreciation of the value of the special instruments invented by him, the Surgeon-General of the Army has ordered a Tokio manufacturer to supply the surgeons of the army with these instruments.

A Congress of Nurses.—To the immense number of congresses which will be held at the World's Fair in Chicago this year may now be added that of an International Nursing Congress, which we learn has been arranged. The proposal originally came from the Royal British Nurses Association, and has since been warmly taken up by the nursing authorities in the United States.

A Movement is on foot in England looking to the creation of a department of public health with a responsible minister at its head.

The British Medical Association will hold its next annual meeting at Newcastle-on-Tyne on August 14, 1893.

Doctors of Hygiene at the University of Durham.—The University of Durham, England, has added two more degrees to their list, available for those who undertake the study of medicine. The degrees in question are to be known by the symbols "B. Hy." and "D. Hy.," or Bachelor and Doctor in Hygiene, respectively. The course will not only partially cover the ground comprised in the "D.P.H." and the diploma in Public Health granted by several of the other universities, but it will also include examination in such subjects as bacteriology, vital statistics, and sanitary medicine.

Creosote Enemata in Phthisis.—Although Bergeon's method is dead and buried, a Polish doctor believes in using the rectum in preference to the stomach for the exhibition of drugs, notably of creosote. Fourteen cases were treated by doses of 20 grains each administered in emulsion per rectum. Five cases got no worse, seven got no better, and two grew worse, until the treatment was discontinued. Rather encouraging results for Poland.

Dr. W. C. Jarvis has resigned from the City Hospital and Dr. James R. Hayden has been appointed.

The New York Ophthalmological Society.—At the annual meeting the following officers were elected: *President*, Dr. W. F. Mittendorf; *Vice-President*, Dr. W. S. Dennett; *Secretary and Treasurer*, Dr. Frank N. Lewis; *Committee on Admissions*, Dr. H. D. Noyes, Dr. C. E. Hackley, and Dr. David Webster.

Hospitality.—A shoemaker has a card in his window reading: "Any respectable man, woman, or child can have a fit in this store."

Some of the Therapeutic Work of the Past Year.—Arsenite of copper in anæmia, the use of atropine as a hæmostatic, and the value of camphorated oil in cases of collapse have received attention. The administration of oxygen in various acute respiratory affections led to numerous communications; it was employed together with strychnine in pneumonia, alone in a severe case of broncho-pneumonia following influenza, and it was also recommended in asthma and in convalescence—massage, electricity, and oxygen being regarded as substitutes for change, exercise, and sea-air. Rectal antiseptic injections in epidemic influenza, and in advanced phthisis with large cavities, have once more received commendation. Phthisis has also been treated with creosote, guaiacol, camphoric acid, and cantharidinates, but increased experience with the last-named has given rise to some anxiety owing to the frequency of consecutive albuminuria. In the treatment of vomiting hydrochloric acid and strontium bromide have been recommended; chlorobrom has been used for sea-sickness and solanine for painful disorders of the stomach; orexin hydrochlorate has somewhat gained in favor as a stomachic and aid to digestion; salicylate of bismuth has been used in infantile diarrhœa and lactic acid in many other forms of diarrhœa, having given good results even in phthisis. Much has been written of the value of glycerine in the treatment of hepatic colic, for which, when due to gall-stones, large doses of olive-oil have also been recommended. Thymol has been vaunted as an anthelmintic, but its range of application appears to be very restricted.—*Lancet.*

Harvard Medical Society.—At the annual meeting of the Harvard Medical Society of New York City, the following officers were elected: *President*, Dr. William J. Morton; *Vice-President*, Dr. R. W. Wilcox; *Secretary and Treasurer*, Dr. Dillon Brown.

Wasted Lives.—Lode has made the curious calculation that the number of spermatozoa in one ejaculation is upward of two hundred and twenty-five millions, and that for one Graafian follicle eight hundred and forty-eight millions of spermatozoa are formed.

The Operative Tendency of Gynecological Therapeutics.—The year now closing, like its predecessor, has witnessed a great activity in operative procedures and in the recording of results at the various societies devoted to obstetrics and gynecology throughout the country. As a rule, little or no mention has been made of the treatment of the diseases peculiar to women by drugs or remedial measures short of surgical operations—a department of therapeutics which, we think, is being somewhat overlooked by the societies.—*Lancet*, December, 1892.

The Death of Dr. Samuel Logan, Professor of Anatomy in the Tulane University, New Orleans, is announced. Dr. Logan was sixty-one years of age, a graduate of the Southern Medical College, and one of the leading surgeons of the State.

The Composer Rossini wrote thirty-six grand operas in nineteen years. Partly through overwork and partly through the depressing emotions caused by witnessing the revolution of 1848, he became a neurasthenic, and was for years a sufferer from this protean malady. At the age of thirty-seven he abruptly stopped writing, and did little more productive work.

A Xyphopage.—There is on exhibition in Paris a human freak very closely resembling the Siamese twins. They, or rather it, consists of two Indian girls united at

their xyphoid appendages, with the result that they have to face each other most of the time. The band of union is sufficiently elastic, however, to allow them to sit side by side on a pinch. It is fortunate they are of the same sex, and we trust that they are beautiful, for the prospect of staring at each other for some sixty years cannot be enchanting.

Fictitious Temperature.—Dr. Ali Krogins, Physician to the Helsingborg Surgical Hospital, reports an epidemic of sham temperature among patients in his charge. Three men and one woman either simulated a non-existent fever or exaggerated their actual high temperature, by rubbing the bulbs of the thermometers in the folds of their dress, or by tapping with the finger on the upper end of the instrument so as to jerk up the register. The fictitious temperatures were carefully adjusted so as to simulate enteric fever, the evening temperature being made higher than the morning. By using two thermometers simultaneously, one in the rectum and one in the axilla, and by careful watching, the fraud was discovered; and the "weaker vessel" confessed that she learned the trick from a woman in another town.

Prostatitis Caused by Cycling.—An interesting paper dealing with the association of prostatitis and bicycle-riding was read at a recent meeting of the Louisville Medico-Chirurgical Society, by Dr. J. W. Irvin. The author said that within the last eighteen months five cases of prostatitis had come under his notice, the cause of which could be distinctly traced to the pressure by the saddle of the bicycle on the prostate gland. Four of the patients were past middle age, and the other was a boy. The symptoms commenced after riding the machine for a few hours. The act of micturition was accompanied with a feeling as though the vesical end of the urethra was raw. Inordinate and persistent priapism followed, coming on at short intervals and lasting three or four days. Some dull pain was felt in the testes. There was no discharge from the urethra at first, but after two or three days a little moisture would ooze out of the meatus urinarius. The discharge was thin and colorless.

Dyspepsia.—M. Jules Simon has found the following treatment very useful in cases of obstinate indigestion:

℞. Tincture of cascarilla, cinnamon, gentian, colombo, rhubarb.....āā 3 ij.
" " nux vomica..... 3 j.

The Medical-Department of the University of California held its commencement on December 15th, and graduated fifteen students, male and female.

The Cooper Medical College of San Francisco held its annual commencement on December 6th, and graduated a class of thirty-eight.

The Bacteriological "Boom."—Manifestly the profession is impressed with the conviction that an acquaintance with germs and their habits is the necessity of future practice. We note that no less than four hundred and nineteen pupils, post-graduates and others, have entered their names as students in Professor Crookshank's bacteriological class at King's College.—*Medical Press.*

The Nestor of New York Surgery.—Professor Thomas M. Markoe is one of the striking figures among the physicians of New York. He was an attending surgeon at the New York Hospital for more than forty years. Two years ago he resigned his active duties there, at a time that he was still able to perform them with full capacity. He is a graduate of Princeton College. Of fine presence, most agreeable diction, he was one of the most interesting clinical lecturers of his day, and now, as the years advance upon him, there is nothing lost in the charm of his speech and the vigor of his action. Long may he be the Nestor of the surgery of New York City! —*Post-Graduate.*

Swallowing a Razor.—There was much excitement in Paris some years ago over "l'homme à la fourchette," a man who had swallowed a fork, which was successfully removed by a somewhat elaborate operation. A still more remarkable case has lately been successfully treated at the Lincoln Hospital by gastrotomy. The following is a brief note which has been furnished to us of this remarkable and interesting case: A woman, aged sixty-nine, in a depressed condition of mind, was supposed to have swallowed a full sized razor on December 13th. She was admitted into the County Hospital the same day. There were no symptoms, and the presence of the razor could not be determined till December 18th, when the end could be felt at the pylorus. On December 19th vomiting commenced, and Mr. Cant, surgeon to the hospital, operated, opening the abdomen by an incision in the median line, then feeling the razor, and bringing the stomach to the opening, he was able successfully to remove it. The wound in the stomach was doubly sutured, and the external wound closed. Thirty hours after the operation the temperature was normal, the bowels had acted naturally, and there was no unfavorable symptom. The razor, a large black bone-handled one, was somewhat acted upon by its six days' digestion.

Mr. Lawson Tait was recently, the English newspapers announce, offered a baronetcy by Mr. Gladstone's Government, but declined the honor.

Dr. J. P. Chasal, of Charleston, S. C., died suddenly in that city on January 8th, at the age of seventy-four years.

The Eye Souffle in Anæmia.—According to Legroux, a valuable sign of anæmia of a grave character may be discovered on auscultating the globe of the eye. In this disease, when the ear is applied to a flexible stethoscope placed over the globe covered by the upper eyelid, a souffle analogous to that heard in the neck and over the vessels of the limbs may be easily distinguished.

The Bacillus of Acute Rheumatism.—M. Lucatello, of Genoa, claims to have discovered the microbe of articular rheumatism. At the recent Medical Congress in Italy he showed several cultures at different periods of their development and in various media of a micro-organism which he had succeeded in isolating in two cases of articular rheumatism. In one case it was found in the blood, the spleen and in an infiltrated ganglion situated near the affected joint; in the other it was obtained from the effused fluid in the knee-joint. He describes it as small and round, staining indifferently by Löffler's liquid, and not developing either in the air or in blood-plasma. *In vitro* it will only grow under fairly thick layers of some solid substance or oil, in hydrogen or in vacuo, at a temperature of 37° C. It has no pyogenic or saprogenic properties.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 5, 1893.

ALFRED L. LOOMIS, M.D., PRESIDENT, IN THE CHAIR.

Annual Report of Officers and Committees. — These reports had been handed to the Secretary, Dr. Kalish, by whom they were read. Subscriptions to the amount of $20,000 toward the liquidation of the bonded debt had been received, a convincing proof of the Academy's prosperity and strength. It was believed the property of the Academy would be permanently exempt from taxation. The total value of the library and other funds amounted to $48,000. The additions to the library during the year had been over thirty-three hundred volumes, over six thousand pamphlets, and over thirty-one thousand journals. A sum of $3,600 was voted for use by the library, aside from salaries during the ensuing year.

Election of Officers.—The election of officers resulted as follows: For *President*, Dr. D. B. St. John Roosa; *Vice-President*, Dr. L. A. Stimson; *Trustee*, Dr. Arthur M. Jacobus; *Committee on Admission*, Dr. Richard Van Santvoord; *Committee on Library*, Dr. Frederick Peterson. Five delegates to the State Medical Society were elected as follows: Drs. H. D. Chapin, Hobart Cheesman, H. C. Coe, William A. Ewing, Leroy M. Yale.

A Contribution to Brain Surgery; Diagnosis, Localization, and Operation for the Removal of Three Tumors of the Brain, with some Comments upon the Surgical Treatment of Brain Tumors.—This was the title of a paper by DRS. CHARLES MCBURNEY and M. ALLEN STARR. The first part, relating to surgery, was read by Dr. McBurney. It was important, he said, to put all cases on record, successful or unsuccessful, until the exact limits of surgical treatment of brain tumors, and indeed of brain surgery generally, had been well established. So far as was known, 87 operations had been done for brain tumors, 74 cerebral, 13 cerebellar. Number of cases in which no tumor was found: Cerebral, 16; cerebellar, 7. Number of cases in which a tumor was found and not removed: Cerebral, 1; cerebellar, 2. Removal with recovery of patient: Cerebral, 38; cerebellar, 2. Removed and patient died: Cerebral, 19; cerebellar, 2. Thus the percentage of recoveries after successful localization and removal was 46. The author thought this was encouraging. The failures were due to lack of sufficient localizing symptoms, inaccessibility of the tumor or wide infiltration of the brain, or to the fact that the operation had been undertaken only to relieve intra-cranial pressure. Thirty-four of the cerebral cases were in the motor area, and it was when the tumor affected this area that its location was easiest to determine. Removal had been successful from almost all parts of the convexity; it was impossible to reach mesial or basilar tumors.

Operation for cerebellar tumors was essentially exploratory: the tumor had been reached in only six of the thirteen cases. Assuming that an accurate diagnosis of brain tumor had been made and the localization carefully studied by a neurologist, grave doubt would still exist as to the tumor's consistency, vascularity, depth in the brain, whether encapsulated or infiltrating the brain. Unexpected difficulties were liable to arise at any time which made the operation always an important if not a dangerous one. There had been death in fifty-four per cent. of the cases operated upon. Operation should be postponed if there were a moist or discharging scalp from eczema, etc.

The incision of the scalp should be free, say three inches in diameter. The horse-shoe incision was best, and he made it complete at once and used gauze pressure and forceps to arrest hemorrhage. A common procedure was to make a trephine opening and then break up the bone by rongeur forceps. But Dr. McBurney preferred the bone-flap method. Subsequently this could be turned down again and unite, closing the wound, or it could be left partly open for a time for removal of gauze inserted to prevent hemorrhage. The dura divided, the presence of a tumor might be determined by sight, by palpation, by blunt probe, or by aspirating needle. Wounded vessels of the pia might be troublesome. A light touch with the cautery was the quickest way of disposing of the smallest ones; pressure or ligature might be necessary. It was useless to try to ligate or sew up a bleeding sinus; pressure with gauze or forceps would prove most successful. Hemorrhage from the cavity previously occupied by the tumor was controlled by gauze dressing. Whether it was safe or justifiable to cut away a considerable portion of the cerebellum to reach a deeply seated tumor would have to be decided by experience.

Dr. M. Allen Starr then reported the three cases. The first occurred in a farmer, aged forty, who had been in good general health until this illness. December 1890, he was suddenly seized with a feeling of dizziness and distress which turned into a convulsion and he was picked up unconscious, remaining so two hours and a half. This was the only convulsion or sudden attack during his illness. The right side was weaker than the left. The next six months there was headache and occasionally nausea; then sight began to get dim, headache more intense, becoming localized over the forehead and top-head on the left, not particularly worse at night. During this time there was progressive dulness of thought and difficulty in use of language, although words and pronunciation were not wanting. Dr. Derby, who referred the patient to Dr. Starr, found optic neuritis worse on the left. These symptoms were increased when Dr. Starr saw the patient, the knee-jerk was exaggerated, right hemiplegia slight, no objective anæsthesia. The diagnosis was of brain tumor, but its situation was doubtful, yet he thought that owing to the intellectual dulness and gradually increasing motor symptoms, and certain interference with speech that the second frontal convolution was involved with functional implication by proximity and growth of the motor and insular areas. The patient had had syphilis twenty years before, but did not improve under specific treatment. An analysis of twenty-three cases of tumor of the frontal lobe had shown mental disturbance in one-half of them. It was in this part of the brain that Dr. Starr, with others, placed the intellect: here was the physical basis of judgment and reason. The mental dulness in the present case was of a kind pointing to implication of this region of the brain. An operation was recommended, but not being accepted it was not urged. Finally, in June, 1891, the patient being in a much worse state, nearly blind in the right eye, unable to see letters with the left, motor and mental symptoms worse, urine passing involuntarily, an operation was permitted, and was performed by Dr. McBurney. The tumor was found where it had been expected, in the posterior part of the second frontal, the adjacent portion of the first frontal, and the upper half of the anterior central. It was much larger than had been supposed, measuring three inches and a half by about two inches. It was an encapsulated sarcoma. The hemorrhage and shock were marked, and death took place after eight hours.

Fibro sarcoma of the Cerebellum and Pons.—Such proved to be the nature of the second case. The patient was under observation about a year until December, 1891, when he died. When first seen there was severe frontal and occipital headache, vertigo, tinnitus aurium, numbness of the left side of the face and in the mouth, and continuous feeling of drowsiness and dulness. These symptoms had developed gradually during the preceding three years. During the last year vision had become double, with increasing blindness, well-marked choked disc, decrease of visual fields. Speech slow and thick. No disturbance of sensation, motion, or reflexes; no ataxia. The existence of headache, vertigo, tinnitus au-

rium, nystagmus, diplopia, and choked disc established the diagnosis of brain tumor, but its location could not be determined. There was no specific history, and no improvement took place under iodide of potassium. By October 1st the patient was quite blind. There was well-marked optic atrophy, deafness in the left ear, considerable staggering in walking, marked tendency to turn to the right, and to fall to the right and forward, symptoms which pointed to the cerebellum as the seat of the tumor. There was some weakness of the right hand. That the lesion was on the left side was shown by the pain in the left side of the face, tinnitus in the left ear, which afterward advanced to deafness, and later the headache remained almost constant in the left occipital region. As gumma was excluded, and the tumor formed slowly, it was supposed to be a sarcoma. The staggering might take place toward or from the side of the tumor.

Dr. McBurney made an opening about an inch and a half in diameter. The dura protruded strongly, indicating pressure within. No tumor could be seen or felt. The surface of the cerebellum protruded too much to be replaced and the excess had to be shaved off. Union was complete, apparently, on the third day. There was no noticeable change in the symptoms except that head ache was not so severe. On the third day the patient fell out of bed, a blood-clot was found beneath the skin-flap, chill occurred, the temperature went up, stupor increased, and the patient died about eleven days after the operation. The autopsy revealed a glio-sarcoma, not encapsulated, but yet distinct from the cerebellar tissue, situated on the lower anterior surface of the left lobe, extending on the lower left half of the pons. The fifth auditory and facial nerves were pressed upon but not degenerated. Evidently the tumor could not have been reached by operation.

Glioma of the Cerebellum.—The third case occurred in a little girl, who suffered from headache, gradually advancing blindness, due to optic neuritis, difficulty of walking, marked staggering, but not constantly in any one direction, slight tendency to fall backward and to the left. She complained at times of aching in the right ear. There was no cranial nerve palsy, no hemiplegia. The diagnosis was of cerebellar tumor, probably of vermiform lobe, more likely to the right than to the left. Absence of cranial nerve palsy showed it was not at the base. Dr. McBurney operated December 29, 1891, chiselling down on the right cerebellar lobe and using the rongeur forceps. Nothing was found except on introducing the aspirating needle half an inch from the median line, when two drachms of a clear serous fluid was withdrawn. Nothing could be obtained when the needle was introduced a second time. The patient had some shock, but next day was about as well as before the operation, and continued so until sudden death, in convulsion, six days after the operation. The autopsy showed a glioma two and a half by two by one inch, involving the vermiform lobe and extending to both hemispheres, especially in the right, just under the cortex. In its centre was a small cyst. Dr. Starr had found, according to statistics, the percentage of deaths after cerebellar operations to be seventy-seven, while after cerebral it was fifty-one.

Dr. R. H. Derby impressed the importance of examining for optic symptoms in all cases of cerebral tumors. They seemed to be present in a good proportion of cases.

A Full Confession Recommended.—Dr. Landon Carter Gray complimented the authors on their frank report of cases not altogether successful, and he hoped that all neurologists and surgeons would imitate their example, in order that all the facts might be had on which to base an opinion as to the diagnosis and propriety of an operation in these puzzling cases. He had himself several cases yet to add to the unsuccessful list, as had also Dr. Starr. Our present means of localization applied to few and limited areas of the brain, and even in those instances one was unable, as a rule, to say whether the tumor would be accessible or be removable until the skull had been opened. There was still another difficulty not alluded to by the readers, namely, possibility of multiple tumors, which was illustrated by one of his cases. He was glad the old-fashioned method of making a mere peephole with the trephine was no longer practised. An early operation was urged, for he had again and again seen removal of a tumor fail because put off until too late. As to optic neuritis, while it developed in a large proportion of cases, yet it was not, as a rule, recognized until other symptoms had established the diagnosis. Even if the tumor were not found, an operation often resulted in much benefit by relieving pressure, as had been shown in some of his cases.

Dr. Herman Knapp expressed admiration of the diagnostic and surgical skill manifested in one of the cases reported, which he had also seen, and expressed the hope that hereafter an earlier operation could be obtained.

Some Bellevue Statistics.—Dr. C. L. Dana gave statistics of 29 cases of brain tumor at Bellevue Hospital the past five years, all of which he had examined except 12. Five were operable. Two operated upon were of the frontal lobe, and died. The others, which were operable, related to tumors of the central convolutions, and he thought their removal might have saved or prolonged life. Thus ten per cent of the 29 cases might have been operated upon with a fair show of success. Successful operations, however, might still leave the patient paralyzed, or in as bad a condition as before, if not worse.

Dr. B. F. Curtis said he had operated on but one case for brain tumor, tubercular, which had already been reported. It was in the temporal region, was successful, the patient was improved, but recurrence took place after some weeks and caused speedy death. In operating morphine-ether anæsthesia gave a quiet pulse and less hemorrhage than some methods.

Dr. Weeks said he had seen the two cases of cerebellar tumor, and had been struck by the complaint of severe headache and nausea, with temporary relief by vomiting; also by the continued fever, and inquired of Dr. Starr the significance of these. He then spoke of the significance of optic neuritis in tumors of the brain, it being present in about four-fifths of all cases. After reviewing the theories offered for its explanation, Dr. Weeks said the papillitis was probably due to neuritis conducted along the trunk of the nerve by continuity of tissue until it reached the eye.

Dr. H. D. Noyes said it was true that optic neuritis was likely to come as rather a late symptom in brain tumor, nor could one tell by its appearances what was the nature of the inflammation or process in the brain which caused it, much less determine thereby the location of the cerebral trouble. Change in the field of vision, however, due to direct or indirect encroachment upon the visual cortex, possessed certain localizing value.

Dr. E. D. Fischer thougnt the direction of staggering of little value in deciding on which side the cerebellar tumor was located. He had recently made an autopsy in a case of sudden death with hemiplegia, which had been diagnosticated as hemorrhage of the brain. A tumor of the cerebellar lobes was found, pressing somewhat on the middle lobe, and an operation would probably have proven successful, but there had been no localizing symptoms. While the outlook for operation on brain tumors in general was bad, yet he believed it should be undertaken, since without it the patient would die.

The authors closed the discussion. Replying to Dr. Weeks, Dr. Starr said he had seldom found fever in brain tumors, and did not think it of diagnostic importance. Headache was important in pointing to brain-trouble, but its location was unreliable in determining the seat of lesion. In syphilis it was largely nocturnal. He agreed with Dr. Noyes as to the value of hemianopsia.

SECTION ON SURGERY.

Stated Meeting, January 9, 1893

JOSEPH D. BRYANT, M.D., CHAIRMAN.

Election of Officers.—The present officers were elected for another term: *Chairman*, Dr. Bryant; *Secretary*, Dr. W. W. Van Arsdale.

Extensive Malignant Tumor of the Cheek; Removal.—DR. A. M. PHELPS presented a young man who had had an extensive malignant tumor of the right cheek, involving the periosteum of the malar bone, but not the bone itself. To avoid deformity and to cover the wide space left after excision of the tumor, he resorted to the method which he believed was first employed by Dr. Alfred C. Post, of drawing the integument and platysma myoides up from a serpentine incision made down the side of the neck. The result had been nearly perfect. Sensation had partly returned.

Excision in Old Dislocation of the Humerus.—Dr. Phelps presented an aged man, who, when he first saw him, had had dislocation of the left humerus for several months. The bony adhesions in the new situation were firm, and instead of following the common plan of forcibly breaking them up and trying to return the bone to the glenoid cavity, he cut down, removed the head, and replaced it in the glenoid cavity after this had been cleaned of its newly formed material. He was inclined to think the procedure which he followed the better of the two. The patient had fair motion.

Removal of a Button from the Œsophagus, two Inches below the Upper Border of the Sternum.—Dr. Phelps related a third case, that of a child, three years of age, who had swallowed a Tammany campaign button and gotten into trouble thereby. She was referred to him by Dr. Jackson, four days after the accident, and then was under Dr. Rice's care for two days, who thought the button was in the œsophagus, not in the trachea. Various means were resorted to for fishing it up, but all proving unsuccessful, Dr. Phelps resorted to incision, about the seventh day. It was situated two inches below the upper border of the sternum, seven inches down. He made the incision to one side, following down the anterior border of the sterno mastoid, as usually recommended; but if he had to repeat the operation he would incise in the median line, so as to enable him better to retract the trachea to one side and the muscles to the other. The incision was made into the œsophagus just above the innominate vein, and from there he was able to introduce the forceps down two inches and get hold of the foreign body, but could not remove it. Not being able to cut farther down in front because of the innominate vein, he pulled the trachea to one side, pulled up on the œsophagus, and managed to cut into it posteriorly where the button could be seen and removed. The wound being a lacerated one, it was left open, and the general rule of feeding by the rectum was at first followed, but finding the child was failing, he introduced food into the stomach by œsophageal tube. Had this been done from the first, he believed the child would not have died of exhaustion, which it did on the sixth day.

DR. CARL BECK also presented a campaign button which he had removed from the œsophagus of a child by incision at the upper border of the first rib. It had perforated the œsophagus toward the trachea, on which it exerted pressure. The wound was treated openly, packed with gauze, but the case was another one illustrating the danger of delay, for the child died in twenty-four hours. Attempts had been made to remove the foreign body by instruments before he saw the case.

DR. LILIENTHAL presented a patient in illustration of his paper, read later.

Recovery of Large Iliac Aneurism following Needling by Macewen's Method.—The Chairman, DR. BRYANT, presented the man. He was thirty five years of age; had had a chancre fifteen years before. Twenty-two months ago, while lifting a heavy weight, supported against the iliac region, he experienced a tearing sensation, which was followed quickly by a pulsating tumor above Poupart's ligament. The man first saw Dr Wyeth, who, he said, put something into the tumor, believed to be a wire, but he got no better. Afterward a weight was applied, but without apparent benefit. He came under Dr. Bryant's observation last July, when he was suffering great pain. The tumor was apparently connected with the right external iliac. He had long needles made, varying in diameter from half a millimetre to one millimetre. The smaller was introduced the first time, and with it he was unable to tell when the opposite side of the tumor was reached. Two of the needles were left in twenty-four hours, but without appreciable change. Larger ones were introduced six days later and left in the tumor forty-eight hours. Within a week the bruit lessened, and disappeared entirely in two weeks, and soon there was no pulsation. The pain also ceased. The tumor was still formidable in size, but was hard, and until the examination when the patient was presented, no pulsation could be felt; then, however, Dr. Bryant thought he had noticed some evidence of pulsation, but could not say so positively.

Tubercular Peritonitis.—DR. CARL BECK presented a girl, of about twelve years of age, who had undergone at the hands of various doctors various kinds of treatment for pain in the region of the stomach. About three months ago the doctor who sent the case to him recognized a tumor, believed to be perityphlitic, which persisted in spite of ordinary treatment, and Dr. Beck then cut down upon it, and found not only evidence of thickening and inflammatory change about the cæcum, but also tubercular nodules of the mesentery. He rubbed these with iodoform. The patient was doing well, and he hoped would completely recover.

DR. W. B. COLEY said, regarding this last case, that, according to the reports of St. Bartholomew, as many cases of tubercular peritonitis recovered under simple medical treatment as after Tait's method of excision.

DR. B. F. CURTIS had treated a large thoracic aneurism by Macewen's needling method two years ago, scratching the inner walls of the tumor by the point of needles introduced through the chest-walls. The tumor, however, grew steadily and the patient died. An autopsy could not be obtained. He wondered whether in Dr. Bryant's case a red clot had not started about the needles which were left in, and not a white one, as was intended by Macewen.

Incision of Retro-Pharyngeal Abscess, according to Antiseptic Principles, from the Neck.—DR. WILLY MEYER read a paper on this subject. He took the ground that incision of a retro pharyngeal abscess should never be made by the mouth for the reason that antisepsis was impossible and there was much danger of infection. This was especially true of tubercular abscesses, such as occurred in connection with cervical spondylitis. The method of incision through the neck practised by him was that described several years ago by Burkhardt. American medical literature seemed not to have mentioned it, hence his present communication. The number of cases in which he had employed it was four, and he could say that it was comparatively simple, and permitted of drainage and strict antiseptic methods. It should be resorted to as soon as digital exploration revealed the presence of an abscess in the retro-pharyngeal region. Experience and the individual case would have to decide whether it were best to make the incision behind or in front of the sterno cleido mastoid.

DR. WHITMAN thought the arguments advanced in favor of posterior incision *versus* incision through the mouth especially weighty when applied to retro-pharyngeal abscess connected with cervical Pott's disease. Opinions might differ as to the propriety of opening abscesses connected with Pott's, but when one occurred in the cervical region he thought there could be but one procedure, namely, incision.

DR. PHELPS agreed with Dr. Whitman's remarks, and

expressed the decided opinion that all abscesses, whether so-called cold and connected with vertebral disease of any region, or any other nature, should be opened and treated antiseptically.

Drs. Reginald Sayre, B. F. Curtis, Carl Beck, and Lilienthal agreed with the author, more especially as to the desirability of the neck incision for abscess connected with cervical spondylitis. Dr. Beck made a counter-opening, also from the other side, and Dr. Lilienthal would incise the integument a little farther back, along the trapezius, using only blunt instruments after cutting through the skin and fascia.

Dr. Van Arsdale endorsed the position of the author, but stated several reasons why acute retro-pharyngeal abscesses, such as often occurred in children, would probably continue to be opened through the mouth. Compared with incision through the neck it was simpler, especially for the general physician, it appeared less formidable to the parents, general anæsthesia was not required, healing took place in three or four days, etc.

What is the Site of Infection Producing Epitrochlear Glandular Enlargement.—Dr. Howard Lilienthal read a paper with this title. It contained the histories of eleven cases of anterior infection, twenty-nine posterior, and one doubtful. A few were read and one patient was presented. Of the anterior infections there were two exceptions to his rule, and of the dorsal infections there seemed to be only one exception. The cause of the infectious process had been simple inflammation, pseudo-erysipelas, epithelioma, and syphilis. When infection took place on the back of the fingers, hand, and superficial portion of the ulna, there was so little tissue between skin and bone that both the superficial and deep lymphatics were likely to be involved with epitrochlear enlargement. On the other hand, when the anterior surface was infected superficially only the superficial chain of glands was affected, the deeper becoming involved only when the lesion was profound.

Dr. Goldenberg said he had seen some of Dr. Lilienthal's cases, and believed they bore out his hypothesis, which seemed a plausible one; but three cases seen by him abroad were in accord with Sappey's anatomy of the lymphatic system, namely, that the lymphatics of the thumb, index and middle fingers went to the axillary glands, and those of the other two fingers to the cubital.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 28, 1892.

H. P. Loomis, M.D., President, in the Chair.

Rhabdo-myo-sarcoma of the Kidney.—Dr. Martha Wollstein presented a specimen of rhabdo-myo sarcoma of the kidney which had been removed by Dr. Robert Abbé, at the Babies' Hospital, from a baby of one year. Some abdominal enlargement had been noticed for two months, but it was only during the last two weeks that there was any very noticeable increase in the size of the abdomen. The general health remained good. The tumor was found to involve only the upper part of the right kidney, the ureter, pelvis, and lower portion of the kidney being normal. The tumor weighed 3,650 grammes, and measured 20 by 15 by 34 centimetres. It was made up of small round masses, and had a distinct fibrous capsule which was continuous with the capsule of the kidney, and the parenchyma of the kidney was also continued for a short distance over the lower part of the tumor. Apparently the growth began in the parenchyma of the kidney and gradually pushed it aside. The fresh specimen on section presented the ordinary appearance of a sarcoma, except that in some places it was softer and redder than in others. Microscopical examination showed it to be a small round-cell sarcoma, containing an abundance of striated muscular fibres. These fibres were much narrower than in adult muscle. The sarcolemma is said to be absent in such cases, and the speaker said she had been unable to demonstrate its presence in the specimen. In the younger muscular fibres, the nuclei were in the centre, and the striation in the periphery only, thus showing very distinctly the development of the muscular fibres.

There are two theories to explain the development of such tumors: one, that of metaplasia, which claimed to prove the transformation of smooth into striated muscle, and the other, that of Cohnheim, which assumes an error in development, or the inclusion of an embryonic rudiment in an anomalous place. According to the first theory, the growth would originate from the muscle-cells normally present in the capsule of the kidney, and in the walls of its pelvis, ureter, and blood-vessels. Ribbert, who was the chief supporter of this theory in 1886, has, in 1892, admitted that his later studies have not borne out his earlier views. The origin of the two kinds of muscle from totally different embryonic cells, makes this theory untenable. According to the second theory, the development of the kidney and of the striated muscular tissue from two portions of the same mass—the axial mesoblast—makes it possible to understand that some of the cells which will form muscle may wander in, or become surrounded by, some of the adjacent cells which are to form the kidney stroma.

Only twelve similar cases of rhabdo-myo-sarcoma of the kidney have been reported as occurring in children, and one in the adult. Of the twelve cases occurring in children, one reached eight years of age, one four, four died between the second and fourth years, and four between the first and second years, and one at the end of eight months. This seems to support the theory of fœtal inclusion. In not a single case was there a history of the existence of a swelling at the time of birth. Metastatic deposits were present in only three of the twelve cases—one in the serous coat of the diaphragm, one in the liver, and in one only small nodules of sarcomatous elements were found in the liver. Both kidneys were involved in three cases, and in one of these the growth began outside of the kidneys and involved these organs secondarily. In two other cases the growths were polypoid and seemed to come from the wall of the pelvis of the kidney, and in one of these a small polypoid mass was also present in the ureter.

Rupture of an Aneurism of the Abdominal Aorta into the Duodenum.—Dr. G. W. Brannan presented a specimen of aneurism of the abdominal aorta which had ruptured into the duodenum. The patient was a very fat man, seventy-three years of age, who ten years ago had a fall on the chest which was followed for a time by more or less dyspnœa and epigastric pain and occasional vomiting. He continued, however, to have fair health up to last February, when he was seized with very severe pain in the region of the appendix. These symptoms also soon subsided, and he did well up to December 20, 1892, when his attending physician, Dr. Lellman, was summoned because the man had vomited considerable blood, and had also passed considerable blood from the rectum. That evening there was another severe attack of this kind, and a third one on the following evening. The next morning, December 22d, he felt so much better that he got out of bed; there were almost immediate symptoms of collapse, and he died within fifteen minutes. The autopsy was made on the following day. The intestines and stomach were filled with blood, and an aneurism was found springing from the abdominal aorta about half an inch above the renal artery. It was very firm and measured three inches at the base and three inches in height. The transverse portion of the duodenum was firmly adherent over it, and there was a minute opening from the aneurism into the duodenum. The aneurismal sac was filled with a firm clot. The remainder of the aorta contained numerous calcareous plates and spots of ulceration. There was no other lesion of the stomach or intestines.

This condition is exceedingly rare. The records of this Society show eight cases of rupture of an abdominal aneurism into the surrounding tissues, and in not one of

these did it take place into the duodenum. In two of them the rupture was into the peritoneum; in two, behind the peritoneum, and in two, into the pleural cavity. The records of the London Pathological Society for the past forty years show eleven cases of rupture of abdominal aneurism, and in only three of these did it rupture into the intestines—twice into the duodenum, and once into the descending colon. The probable explanation of the rarity of this form of rupture is that three-fourths of all abdominal aneurisms are situated above or below the point where adhesions with the duodenum are likely to form, and half of all such aneurisms grow from the posterior surface. The large firm clot in the aneurism just presented probably reduced the force of the pulsation considerably, and the very abundant adipose tissue in this patient interfered so seriously with palpation that the existence of this aneurism was not even suspected during life.

A Horse-shoe Kidney in Douglas's Pouch.—Dr. J. M. Byron presented a kidney of peculiar form—not a true horse-shoe kidney—but rather of a sigmoid shape. The specimen was removed from a woman who died in Charity Hospital, and it was of special interest because of the fact that the lower portion of the kidney lay in Douglas's pouch. Both the renal arteries in the specimen were derived from the aorta, the one for the right kidney being in its normal position. This kidney was situated in front of the last lumbar and the first sacral vertebræ. In an examination of the literature of this subject, he had been unable to find another case in which the kidney was in this peculiar situation, which is of importance on account of its surgical bearings.

The Society then went into executive session.

Correspondence.

OUR BERLIN LETTER.

(From our Special Correspondent.)

THE DISPUTE BETWEEN LOCALISTEN AND CONTAGIONISTEN—THE CHOLERA RED REACTION—A COMFORT FOR TOBACCO SMOKERS—TRIALS WITH THE IMMUNITY OF DIPHTHERIA—PROFESSOR UFFELMAN'S INVESTIGATIONS IN REGARD TO THE BIOLOGY OF THE CHOLERA BACILLI—THE IMPORTANCE OF CREOSOTE AS A REMEDY IN PULMONARY TUBERCULOSIS—A CASE OF ARSENICAL PARALYSIS.

Berlin, December 20, 1892.

The most prominent item of interest at this moment causing gossip is undoubtedly the cute self-infections of Pettenkofer and Emmerich, which we mentioned in our last correspondence. These experiments and the deductions therefrom have caused an intense feeling between the Munich School and Koch's followers at Berlin, as a distinguished representative and former scholar of Koch, Professor C. Fränkel, in Marburg, undertook to investigate the results shown by the Pettenkofer-Emmerich trials. Fränkel insists that both Pettenkofer and Emmerich underwent a mild, but nevertheless typical, attack of Asiatic cholera, and exemplifies it by quoting the experience of Dr. Paul Guttmann, gained at the Moabit Hospital in Berlin, in which he found, as the only symptom of Asiatic cholera numerous diarrhœal evacuations containing numerous comma bacilli.

Fränkel believes that we are dealing in such cases with a changed virulence of the cholera bacilli, which he hopes to prove experimentally. Furthermore, Fränkel argues against the statements of Pettenkofer, that the last epidemic at Hamburg was subject to changes of atmosphere and owed its virulence to its surroundings.

The summer of 1892 was intensely hot and dry in Hamburg, the rain was little, and consequently the state of the aqueducts a minimum; along with this the filthy condition of the streets which, instead of having the sewage washed from the canals into the Elbe, frequently had them dammed back and thrown again into the city. Fränkel believes that the arguments of Pettenkofer about dryness of the atmosphere in Hamburg had existed not only there, but all over North and Middle Germany.

About the filthy condition of the subsoil, Fränkel points to the fact that, although there were 8,200 deaths in Hamburg, there were in the adjoining (and therefore continuation with Hamburg) Altona 316, and in Wandsbeck but 43 deaths. Pettenkofer has, since announcing his investigations, strenuously objected to the methods of prevention enacted by the government, inasmuch as he believes that intercourse between human beings cannot be made "germ-proof." Fränkel, backed by the latter statement, insists that in order to prevent the distribution of bacilli it would seem indicated to "prohibit travel from infected places." That the prophylactic methods enacted in Germany were proper, can be proven by the fact that, although Germany was flooded with cholera-germs as well on the border-line as in its interior, the epidemic remained strictly local. That the epidemic gained such remarkable proportions is proven by Fränkel to be due to the use of unfiltered river water, and this use of water is positively shown by the smaller mortality in both Altona and Wandsbeck. Fränkel sums up by stating that both Pettenkofer and Emmerich emptied their "own" personal dejecta into ditches and water-closets, which Fränkel regards as decidedly dangerous. Even though accepting the statements of Pettenkofer and Emmerich, we must consider that not only was the harmlessness of the cholera bacilli not proven, but dare not and should not be proven.

Against Fränkel's remarks, Professor Emmerich, of Munich, retorts rather vigorously. Emmerich points to the fact that the cholera bacilli which both he and Pettenkofer took internally, came from a virulent pure culture of a patient at Hamburg. As the cholera bacilli existed in pure culture in the fæces, so we must take the disposition of the experimented person into consideration; and still the toxic effect was wanting, owing to the conditions of soil and climate. The other statements of Fränkel are all contradicted by Emmerich. About the treatment of the excrements, Emmerich points to the fact that they never prove infectious, as not proven by Pettenkofer, Cunningham, and Post. Emmerich further proves the fact that he had been for weeks, during four severe epidemics, with cholera patients ante and post mortem, and although he personally used no disinfectants, that he was entirely free from infection. There was also no fear for infection of Munich during these experiments, because all previous epidemics were in "spring" and early in the "fall," and besides there was a high condition of the water owing to large rainfalls.

Two days ago Dr. Wernicke read a paper entitled "Studies with Cholera Bacilli and Diphtheria Bacilli," in which some interesting points were brought out, especially so in regard to the so-called "cholera-red" reaction.

The latter consists of a red color, or rather a rose color, produced by concentrated sulphuric acid in the presence of comma bacilli. This reaction was regarded until now as the most characteristic for cholera. Wernicke found that cholera red reaction can also be produced by examination of dejecta of patients not suffering with cholera asiatica. It is therefore out of question to rely in the future on the acid reaction as an aid in the diagnosis of cholera.

Especial interest will be awakened by Wernicke's examination of tobacco in regard to cholera—more especially, however, for the trade—for Wernicke tested the vitality of the comma bacillus in the presence of all sorts of tobacco. The examinations are of extreme importance, bearing on the question whether tobacco may be received during a cholera epidemic from an infected locality. Wernicke found that the chances of infection through the agency of tobacco are so slight that they may be entirely discarded. Cholera bacilli invariably die on tobacco—the time required varies with the strength of the

tobacco. It depends chiefly on the amount of moisture of the tobacco leaves, as also from the quantity of the acid (acid reaction) present in tobacco. The more acid present the quicker do the bacilli die; the reverse is true the greater the amount of moisture present. Generally speaking, there are always so many different kinds of bacilli present on tobacco that cholera bacilli cannot gain a foothold and die quickly.

The remarks of Wernicke in regard to diphtheria concern the so-called "Blood-serum Therapeutics." He found that by injecting weakened cultures of diphtheria into dogs, he could thereby produce an immunity in them against diphtheria. With the blood-serum of an immune dog, Wernicke could render a guinea-pig proof against diphtheria by artificially produced disease, which under other circumstances always proved fatal. About the application of blood-serum in the human being no account has as yet been rendered.

A series of very interesting investigations about the biological characters of the comma bacillus have been announced by Professor Uffelman,[1] of Rostock. The following is a brief *résumé* of some:

1. In water, as in river water of Rostock and Oberwarnow, near Rostock, cholera bacilli will keep alive one to two days, sometimes as long as five to six days, if the temperature of the water is 19° to 21° R. So there seems to be an increase of the cholera bacilli during the first fifteen to sixteen hours. This applies, however, only to calm water and without direct sunlight. 2. In cow's milk cholera bacilli will remain alive one to two days, even though the milk turns sour. In this same medium there can be an increase of the cholera bacilli at a temperature of 18° to 22° C. during the first twelve to sixteen hours. On slices of rye-bread not bundled, cholera bacilli will remain alive about one day; if they are packed up in paper they remain alive about three days; if kept under a glass bell-jar they remain alive about one week. 4. On the surface of weak, sour butter they remain alive about four to six days; on the inside of a quantity of butter, only one to two days. 5. On fried meat, if kept under a glass bell-jar from drying, at least eight days; on the flesh of smoked herrings under same conditions, they will keep alive about four days. On the surface of fruit, cholera bacilli will keep alive twenty-four to thirty hours; if placed under a glass bell-jar, about four days; on fresh cauliflower under different circumstances, one to three days. 7. On printed paper, or a recently folded book, they will remain alive about seventeen hours; on a sheet of writing paper enclosed carefully in an envelope, at least twenty-three and one-half hours. On postal cards without wrapping, at least twenty hours after drying on the card. 8. On copper and silver coins the cholera bacilli in dried state die very quickly, sometimes in thirty minutes. 9. On drygoods, woollens, and linens, they remain alive an indefinite time, certainly, however, one to four days. On moist fabrics they will retain vitality as long as twelve days, sometimes even longer. On moist linen they will increase in numbers, for they can be detected on non-infected spots. 10. Flies will remain infectious at least two hours after having been in contact with cholera material, and infect milk and meat, which can be proven by examination. 11. On the dried human hand cholera bacilli will retain vitality at least one hour, but will not be alive at the end of two hours.

The treatment of tuberculosis with creosote is still giving rise to decided differences of opinion. Such, for example, as Professor Sommerbrodt, of Breslau, who still believes it to be a specific in pulmonary tuberculosis, and a host of followers on the other side, who believe it to be a symptom remedy and nothing else. It will be interesting, therefore, to note the report of Dr. Albu, an assistant at the Moabit Hospital, who recorded the result of a large amount of material treated with it. This he embodied in a paper read before the Berlin Medical Society.

[1] Berl. Clin. Weekly, No. 48, 1892.

In order to gain a standpoint in the treatment of tuberculosis pulmonum, it is necessary to differentiate between the changes in the tubercular process and the objective appearances, by means of the same. The criterion in pulmonary phthisis is the condition of the fever, and also the presence and absence of the tubercle bacillus. It had always proven, in the hospital cases under consideration, that creosote exerted no influence on the fever nor on the disappearance of the bacilli. It was furthermore shown that those cases which were benefited under the creosote treatment could have been equally cured under the combined influence of hygienic and dietetic treatment. Dr. Albu furthermore found that the sputum proved equally virulent for animals, even though enormous quantities of creosote had been taken internally.

The speaker could only ascribe to creosote the action of an expectorant, *i.e.*, a symptomatic remedy, and a remedy which seemed to improve digestion.

In the last meeting of the Society for Internal Medicine, a report was read by Professor Folly, on an interesting case of arsenical poisoning. The case was one of a girl who had, *suicidii causa*, taken a cupful of Schweinfurt green; immediately thereafter severe vomiting took place, followed by an attack of gastro-enteritis lasting two days. The fourth day the patient found that, on arising, she could not tell the difference between standing on stone or wood, also paræsthesia of hands and feet, feeling of formication which culminated in intense pains. These sensory disturbances soon gave place to motor disturbances, especially in the lower extremities. After four days she could not walk unaided. The steps that she took were dragging. The day of admission to the hospital (fifth day) there was found distinct ataxic walk, patellar reflexes, both sides wanting, strong paresis of legs, feet, and toes; all showed lack of motion. After six weeks there was a complete paralysis. At the same time atrophy of the muscles of the calf (calves), also exquisite interference of sensibility.

On the application of a camel's-hair brush, no feeling up to the knees; by stronger application and pricking with pin, good feeling.

The hands showed distinct hyperalgesia. The electrical examination of the lower extremities showed minimal reaction, but not absent. The following few weeks showed a decided increase in pain, feeling of chilliness in right upper extremity and both lower extremities. Lately, a decided condition of diaphoresis on the inner surface of the hands.

About four weeks ago the motor and sensory disturbances have improved, and now patient is convalescing. It might be well to add about the hands, that in the commencement no disturbance was noticeable; later on a weakness of the musculi interossei appeared; now the latter has disappeared.

The speaker classes his cases of arsenic poisoning under those of a multiple neuritis. The arsenical poisoning showed decided difference with that of lead poisoning. The former shows paralysis of lower extremities, whereas the upper extremities by the latter, lead. Sensory disturbances with arsenic, absence of same by lead paralysis. Of special interest is the choice of distinct groups of muscles in the lead paralysis.

Imprisonment of an Alleged American Quack in Dublin.—A man named Hall, who started with an accomplice in Dublin as "The Great American Physicians," and who had to fly because the police were after him for similar frauds perpetrated in Liverpool and Glasgow, was tried recently, and sentenced to eighteen months' hard labor. The defence was that the prisoner is a diplomate of the "Eclectic College" of Cincinnati, and that his medicines (which were sworn to be little else than dirty water) were quite as useful as homœopathic medicines, which, says the *Medical Press*, no doubt they were.

LAPAROTOMY FOR WOUNDS OF THE PERITONEAL CAVITY.

To the Editor of the Medical Record.

Sir: I have read with much interest the address of Dr. Dennis, "The Achievements of American Surgery," which appeared in your issue of December 3d. On page 644 we read: "The operation of laparotomy for the treatment of penetrating gunshot and stab wounds of the peritoneal cavity was the work of American surgery. Gross, in 1843, and Sims, just before his death, both suggested this method, but these gentlemen never practised this method of treatment. It remained for Dr. W. T. Bull to make the practical application of the method, and to him is due the credit of this great advance in surgery. It is a source of national pride that laparotomy in penetrating wounds and visceral injuries of the abdomen was conceived, developed, and perfected in America. The wide-spreading influence of this operation is felt in abdominal surgery, and much of the present advance is the result of Bull's surgery." I have no intention to detract from the brilliant achievements of our American surgeons, but in justice to others, and preferring that the correction of this statement should emanate from an American source, I submit the following data, gathered from the second Surgical Volume of the "Medical and Surgical History of the War of the Rebellion," and a perusal of that volume, published in June, 1876, will satisfy the reader, that its distinguished editor, Surgeon George A. Otis, of the United States Army, deserves no small share of credit for presenting all the evidence on the subject, and earnestly advocating the operation of enterorrhaphy for shot injuries.

Fallopius, in 1606, as quoted by Otis, appears to have favored the plan of enlarging the external wound in order to expose the lesion in the intestine and to practise enterorrhaphy.

Heister, in 1759, Book I., Chapter vii., p. 75, is quoted: "When the intestines are wounded but not let out of the abdomen, and therefore their wounds are out of reach, the surgeon can do nothing, but keep a tent in the external wound. . . . But the question may be asked here, Whether a surgeon may not very prudently in this case enlarge the wound of the abdomen that he may be able to discover the injured intestine and treat it in a proper manner? Truly I can see no objection to this practice, especially if we consider that upon the neglect of it certain death will follow, and that we are encouraged to make a trial of it by the success of others."

Whilst Professor Gross, in 1843, published the "Experimental and Critical Inquiry into the Nature and Treatment of Wounds of the Intestines," and in his subsequent teachings endorsed the propriety of exploratory incisions and of enterorrhaphy in cases of ordinary intestinal wounds without protrusion, he says in his fifth edition of "Surgery," 1875, vol. ii., p. 667: "In gunshot wounds no benefit, it seems to me, would be likely to accrue from such a course of treatment, as the bowel is generally pierced in a number of places, and the case on this account, must, therefore, generally be fatal."

Dr. Otis, however, in his most exhaustive dissertation of the subject, p. 127, reports nine cases of enterorrhaphy for shot wounds of the intestine, with one complete success, three recoveries with fecal fistula, and five deaths, namely:

1. Larrey, in 1799, shot wound of the ileum, bowels stitched to the parietes by Palfyn's, or rather by Lapeyronie's method; fecal fistula with ultimate recovery.

2. Gissing, in 1858, shot wound of jejunum, three interrupted sutures, ends cut close and protruded bowel returned; fecal fistula; ultimate complete recovery.

3. Baudens, in 1831, shot wound of the arch of the colon, Lembert's suture; complete success.

4. Baudens, about 1830, three shot perforations of the intestine, two treated by enterorrhaphy, the third escaped notice; death on the third day.

5. Pirogoff, in 1849, two double shot perforations of the ileum, excision of the wounded portions of the gut, ligation of the mesenteric vessels. Pirogoff lost sight of this patient after the fourth day. "I take it for granted," he says, "that the result was not favorable, and yet I recommend this proceeding as the only possible resource in such injuries."

6. Bentley, United States Army, in May, 1865, five shot perforations of jejunum and colon, three sewn up; fatal.

7. Judson, United States Army, April, 1862, shot laceration of the ileum; suture; death.

8. Gill, United States Army, April, 1865, shot perforation of small intestine; enterorrhaphy; death.

9. Kinloch, Professor of South Carolina, in June, 1863 operated for stercoral fistula following a shot laceration of the small intestine; suture; recovery, with a fistula, tending, at last accounts, to a complete cure.

Dr. Otis, in commenting upon these instances of enterorrhaphy on p. 128, which was published in 1876, but most probably written in 1871 or 1872, says:

"Already interference contrasts favorably with the do-nothing system. Reflection upon the results of ovariotomy, upon the results of gastrorrhaphy and enterorrhaphy applied to protruded wounded viscera leads unavoidably, in the writer's opinion, to a conviction of the propriety of incising the abdominal wall when necessary in order to expose and sew up the wounded gut concealed within the cavity, whether divided by a cutting instrument or by shot. The obstacles to success are obvious; but it is a mortal peril which demands an extreme remedy."

I am without my library, but I have a distinct recollection that Professor Ashhurst, in reviewing Dr. Otis's volume in the *American Journal of the Medical Sciences*, possibly in October, 1876, rather questioned the correctness of the author's conclusion so forcibly presented in the above quotation. I was so strongly impressed with the evidence accumulated by Dr. Otis, that in my review of his magnificent work, published in the "Militairarzt" Supplement to the *Wiener Medical Wochenschrift*, I devoted considerable space to the presentation of Dr. Otis's evidence and arguments, and naturally differed from his adverse critics. I insert here a letter from Dr. Otis, which shows how anxious this distinguished writer on military surgery was for others to avoid a polemic on a method which he had so earnestly advocated:

"War Department, Surgeon-General's Office,
Washington, D. C., December 12, 1876.

"Dear Sir: I have looked over the extract you have sent me with interest. You seem to me to have steered clear of English idiom and make a fair condensation of the subject-matter. I would advise you not to open a polemic with Dr. Ashhurst on laparotomy. Apart from the fact that he carries very heavy critical guns, he has the easiest position to defend. You are on the side of the innovators, and the *onus probandi* is with you. I was free to say to Ashhurst that I knew that neither Legouest nor I had demonstrated our case, but had simply accumulated a good deal of evidence in its favor, and supplied a full justification to practitioners for attempting interference in shot wounds of the unprotruded small gut. Comparatively few experiments would determine the question absolutely. I should assuredly feel justified in instituting them if I had an opportunity. I may add that Dr. Kinloch, of Charleston, and Dugas, of Augusta, are strong advocates of the interference doctrine, and the precepts I have defended, and which Legouest originated, are undoubtedly gaining ground. You will notice that the tempered objections of Dr. Ashhurst are very different from the unqualified condemnation of Professor Hamilton about ten years ago.

"Very respectfully yours,

"George A. Otis."

I have always believed that, while the method was originated and performed in Europe long ago, to Dr. Otis

belongs the credit of publicly recommending the procedure in America, long before the lamented Sims enunciated his views on the subject of laparotomy for shot injuries.

GEORGE M. KOBER, M.D.

FORT BIDWELL, CAL., December 20, 1892.

MORE CORRECTIONS FOR ADDRESS IN SURGERY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the issue of the MEDICAL RECORD for December 3, 1892, there occurs, in the very instructive and ably compiled article of Dr. Dennis on "The Achievements of American Surgery," the following in reference to laparotomy for the treatment of penetrating gunshot and stab wounds of the peritoneal cavity: "Gross in 1843, and Sims just before his death, both suggested this method, but these gentlemen practised this method of treatment. It remained for Dr. W. T. Bull to make the practical application of the method, and to him is due the credit of this great advance in surgery." I do not desire in the least degree to detract from the glory of American surgery in general, or of the special genius of Dr. Bull in particular, which enabled him, by his brilliant and successful operations in this field, to firmly establish the operation in surgery; but I desire, as a matter of simple justice to the memory of an able surgeon and a noble and chivalrous gentleman, to direct attention to the fact that, in the year 1863, Dr. R. A. Kinloch, Surgeon C. S. A., deliberately opened the belly of a wounded soldier in order to repair internal abdominal injuries arising from a penetrating gunshot wound; the patient revived. Again in 1883, Kocher, of Berne, did a successful laparotomy for a penetrating pistol-shot wound in the abdomen.

In 1884, came Dr. Bull's first successful case, followed soon after by others at his own hands. To Dr. Bull undoubtedly belongs the credit of making it a recognized surgical procedure, but is it not well, while meting him due praise for this, to remember that Kinloch's was the *first?*

Respectfully,

J. HOWELL-WAY, M.D.

WAYNESVILLE, N. C.

A MODIFIED GOTTSTEIN'S CURETTE — A QUESTION OF PRIORITY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: At the meeting of Belgian laryngologists, on May 17, 1891, I showed a modified Gottstein's curette, of which I gave a full description, accompanied by a cut, in the *Revue de Laryngologie, d'Otologie et de Rhinologie* for November 1, 1891. A shorter description of this instrument may also be found in my report of the meeting of Belgian Laryngologists in the *Journal of Laryngology and Rhinology*, of London, August, 1891.

I was not a little amazed when I read in the MEDICAL RECORD of September 3, 1892, a description of my instrument under the title, "A Modified Gottstein's Curette," by Carl E. Munger, M.D.

I think that my American colleague has been mistaken in fathering upon himself the modification of Gottstein's instrument; he should have quoted, with the author's name, the paper where he found the description of the modified curette. In other respects he describes very accurately the instrument, and sets off very finely the advantages of the modification. He makes, however, a slight mistake when he speaks of a curette shown by Politzer at a meeting of aurists in London. He ought to have said in 1889, at a meeting in Paris, in order to be exact.

Finally, for the edification of your readers, allow me to give the description of my modification, which is to be found in the *Revue de Laryngologie, d'Otologie et de Rhinologie*, above mentioned: "The ring is made heart-shaped. The depression in the middle of the sharp blade is destined to lodge the septum, while the two lateral portions may penetrate into the choanæ and remove any portion of the adenoid growths extending into those cavities. In order that my instrument may be used more easily and may thoroughly remove at once all the vegetations, I have found it advisable, as was recommended by Politzer at the last meeting of aurists in Paris, to curve the sharp blade on the flat side, so that it may be more easily adapted to the convexity of the basi-sphenoid bone."

I suppose it would be useless to observe that the cut accompanying this description is exactly similar to the drawing given by Dr. Munger with his article in your paper.

I shall feel extremely obliged if you will do me the favor of publishing my letter in your next number.

Yours obediently,

DR. HICGUET,

Chief Surgeon to the Department for Diseases of the Throat, Nose, and Ear, at the Policlinic of Brussels.

BRUSSELS, 24 RUE ROYALE, December 15, 1892.

ILLEGAL PRACTICES ACROSS THE LINE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In looking over the record of Vital Statistics in the town clerk's office of a neighboring town recently, I found that five different physicians, living in the State of Connecticut, had each given a number of certificates of death, and in one single instance only one was the "immediate" cause given, and in that case the "chief or determining" cause was omitted. As I knew that one of them was practising without a diploma, I consulted counsel to see what could be done to improve the statistics. He informs me that while I must be a good citizen, pay my taxes, help take care of the poor, etc., that to practise medicine I must go to the county clerk's office and be registered, and that if I live near another county and wish to practise in it, I must register there also; but that any regular or charlatan who lives and has his office over the line in a neighboring State, can practise here without being registered. This no doubt was not the intention of the framers of the law, but then they say Hades is paved with good intentions.

Yours truly,

C. O. OLMSTEAD.

CROSS RIVER, N. Y., January 4, 1892.

The Remedial Use of Apples.—Chemically the apple is composed of vegetable fibre, albumin, sugar, gum chlorophyl, malic acid, gallic acid, lime, and much water. Furthermore the German analysts say that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. The phosphorus is admirably adapted for renewing the essential nervous matter, lecithin of the brain and spinal cord. It is, perhaps, for the same reason, rudely understood, that old Scandinavian traditions represent the apple as the food of the gods, who, when they felt themselves to be growing feeble and infirm, resorted to this fruit renewing their powers of mind and body. Also, the acids of the apple are of singular use for men of sedentary habits, whose livers are sluggish in action, those acids serving to eliminate from the body noxious matters, which, if retained would make the brain heavy and dull, or bring about jaundice or skin eruptions and other allied troubles. Some such an experience must have led to our custom of taking apple-sauce with roast pork, rich goose, and like dishes. The malic acid of ripe apples, either raw or cooked, will neutralize any excess of chalky matter engendered by eating too much meat. It is also the fact that such rich fruits as the apple, the pear, and the plum, when taken ripe and without sugar, diminish acidity in the stomach, rather than provoke it. Their vegetable sauces and juices are converted into alkaline carbonates, which tend to counteract acidity.—*North American Practitioner.*

New Instruments.

AN IMPROVED FORM OF DIAGNOSTIC ELECTRODE.

By WILLIAM M. LESZYNSKY, M.D.,
NEW YORK.

This electrode possesses the following advantages over those now in use:

1. All of the connections are completely insulated, thus preventing the accidental closure of the circuit upon the fingers of the examiner.

2. The shape of the interrupting handle adapts itself to the fingers and hand of the operator.

3. The curve in the shaft attached to the "motor point" facilitates its adjustment and manipulation.

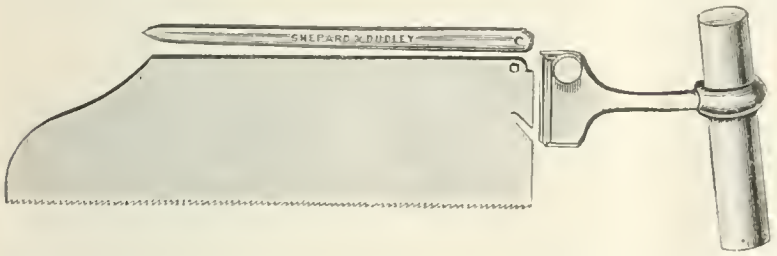
There is a thread cut on the end of the handle where the conducting cord is attached. This permits of a hard rubber cup being screwed on, which entirely covers the connection.

The complete electrode is six and a half inches in length, and has been made for me by the Waite & Bartlett Manufacturing Company, New York.

AN IMPROVED ASEPTIC AMPUTATING SAW.

By WILLIAM R. LEONARD, M.D.,
NEW YORK.

The amputating saws in general use in this country have the old-fashioned pistol-handle shape grip, which is objectionable, especially if the hand is wet or smeared with oil or blood. The grip becomes lessened and the force reduced. The cut here presented shows the improvement at a glance. The saw is in three sections; the



blade, back, and handle, which takes but a few seconds to put together or detach for cleaning. The slot in the blade catches on to a pin in the handle, the screw passes through the handle, back, and blade, making one solid piece. The screw also acts as a joint to enable you to raise the back at a right angle to the blade in case you wish to saw down through the spinal column or a femur. The handle is made round, flat, or oval, preferably round, and is on a plane with the blade connected by a neck. The shape and angle of the handle gives the most secure grip, and it is impossible for it to slip out of the hand. The increased force given by this handle enables the operator to work faster and save several seconds in time in sawing through the femur. I consider it the best and simplest handle in use. It is manufactured by Shepard & Dudley, New York.

Doctors and Ventilation.—A good many comments are made upon the conspicuously wretched ventilation of the various rooms of the New York Academy of Medicine. Though the building was built under medical supervision, the ventilating feature seems to have been left out. The "official temperature" of the library, we have been told, is 72° F. This is rather high for anyone who has not a bad heart or senile arteries; some gentlemen find it impossible to study in the rooms because of the heat and pulmonary excreta.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 14, 1893.

	Cases.	Deaths.
Typhus fever	26	23
Typhoid fever	14	5
Scarlet fever	143	15
Cerebro-spinal meningitis	2	0
Measles	94	12
Diphtheria	140	41
Small-pox	4	1
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

A Schoolboy on Bones.—The following essay on bones was actually written for a school exercise by a boy. It may be found helpful as an introduction to the science of osteology (*The Hospital Gazette*). "Bones are the framework of the body. If I had no bones in me I should not have so much motion, and grandmother would be glad; but I like to have motion. Bones give me motion because they are something hard for motion to cling to. If I had no bones, my brains, lungs, heart, and large blood vessels would be lying around in me, and might get hurted, but now the bones get hurted, but not much, unless it is a hard hit. If my bones were burned I should be brittle, because it would take the animal out of me. If I were soaked in acid I should be limber. Teacher showed us a bone that had been soaked. I could bend it easily. I would rather be soaked than burned. Some of my bones don't grow close to my body, snug, like the branches of a tree, and I am glad they don't, for if they did I could not play leap-frog and other nice games I know. The reason they don't grow snug to my body is because they have joints. Joints is good things to have in bones. There are two kinds. The ball and socket, like my shoulder, is best. Teacher showed it to me, only it was the thigh-bone of an ox. One end was round, smooth, and whitish. That is the ball end. The other end was hollowed in deep. That is the socket, and it oils itself. It is the only machine that oils itself. Another joint is the hinge joint, like my elbow. It swings back and forth, and oils itself. It never creaks like the schoolroom door. There is another joint that don't seem like a joint. That is in the skull. It don't have no motion. All my bones put together in their right places make a skeleton. If I leave any out, or put any in their wrong places, it aint no skeleton. Cripples and deformed people don't have no skeletons. Some animals have their skeletons on their outside. I am glad I ain't them animals; for my skeleton, like it is on the chart, would not look well on my outside.

"Unsound Mind" Verdicts on Suicide.—Though we often read in the newspapers of juries declaring persons to have committed suicide while in a state of temporary insanity, we suspect that there are very few persons versed in history and knowing human nature who really believe that the act of suicide is in itself a proof of mental derangement. Some recent verdicts are well calculated to attract attention to this view of the subject. Few of the legislators of antiquity treated self-destruction as a crime, though of their great writers we can recall Plato, Aristotle, and Virgil, who condemned the practice in a decided manner. The Stoics taught that under some circumstances a man had not only a right to take his life, but if he felt that existence was mere misery and without honor

or profit, he was bound to avail himself of so easy an escape—*patet janua exi*. There is a long list of suicides in ancient history, including the great names of Hannibal and Cato. Men are much influenced in their views of suicide by their religious belief. Sakya Muni did not condemn it, and as death offers to the Buddhist the prospect of a change of being, suicide is very common among the Chinese and Japanese. The Brahminical religion encouraged some forms of voluntary death, such as suttee, and self-immolation before the car of Juggernaut. It is recorded of a Hindu grandee in the time of the Emperor Jehangir, that at his death fifty of his wives allowed themselves to be burned on his funeral pyre. Nevertheless, suicide does not appear to be at present very common among Hindus, who are habitually timid, and often take dismal views of a future life. Self-murder is strongly forbidden in the Koran, save when the faithful give their lives away in battle; hence ordinary suicide is rare in Mahomedan countries. As the Catholic Church condemns self-destruction, it is rare in strictly Catholic countries such as Spain and Southern Italy. On the other hand, the proportion of suicides to the million is much higher in Protestant countries. The Bible is held to be the religion of Protestants, and it contains no express prohibition of suicide, unless we admit that the commandment, "Thou shalt not kill," is designed to forbid a man slaying himself as well as his neighbor. It is in great cities like Paris, Berlin, and Vienna that the proportion of suicides is highest. This is in part owing to the prevalence of materialistic or pessimist views. There is no doubt that a large proportion of those who make away with themselves have previously shown symptoms of mental aberration. From the statistics furnished by Professor Morselli in his elaborate work, "Il Suicidio," it would appear that the proportion is about one-third; and Dr. Wynn Westcott tells us, in his book on "Suicide," that, after careful investigation into all the cases of suicide with which he had to do as coroner, he found that in twenty per cent. only had the deceased ever exhibited symptoms of insanity obvious to the friends and relatives. In modern times, some celebrated writers—as Voltaire, Hume, and Goethe—have defended suicide; and there are instances where men who have never shown any symptoms of insanity, have in a calm and logical frame of mind deliberately renounced the gift of life in order to escape impending misery or disgrace. Those who believe that death is a sure and thorough opiate for misery will now and then find the temptation too hard, and will seek it as the last relief from an unhappy life; but so strong is the love of life, and so indestructible is hope in the human breast, that most men, whatever their belief, will bear their burdens to the end. Hence we are convinced that suicide will never be common with any class. A man who believes that this state of existence is given him as a trial, or that his happiness in the next world will be influenced by a virtuous life, will be the last to think of shortening the period of preparation. We are disposed to advocate the removal of all relics of futile attempts to follow accomplished suicide with legal punishment or disgrace, retaining penalties only against those who would assist in its commission. Even as the law stands, it is a scandal that juries sworn to find according to the evidence should persist in accepting suicide as in itself a proof of insanity.—*British Medical Journal.*

Modern Antiseptic Methods.—Infection from the air is not now feared; instruments and dressings may be absolutely sterilized, so that the sources of danger have been narrowed down to the hands of the operator and the skin of the patient. The subject of how to render the skin free from germs has, of late, received considerable attention. As yet no method has been discovered that will accomplish this object. Numerous varieties of harmless, as well as pyogenic, germs, are found in the glands and in the deeper layers of the skin, which remains after all forms of disinfection. Notwithstanding this, the skin can be so cleansed as to leave little to be feared from this source. Improvement is still to be hoped for, however, in this direction. The use of heat, either dry or in the form of steam or boiling water, is a manifest improvement over corrosive chemicals in the sterilization of instruments and dressings. The sources of infection being known, therefore, to be the skin of the patient or the hands of the operator, the practical lesson to be deduced is to keep the hands from contact with the wound as far as possible. It is desirable to keep the wound dry, and when every precaution is used to have each article sterile that touches the field of operation, the copious floodings with antiseptic solutions become unnecessary, and in fact objectionable. As a result of improved technique, wounds are drained much less frequently than formerly. There is equal necessity now to drain infected wounds that heretofore existed, but when an aseptic operation has been performed through healthy tissues, drainage serves no other purpose than to delay the healing of the wound, and, perhaps, convey infection; particularly is drainage useless when the wound cavity can be obliterated, either by deep stitches or by pressure applied over the dressings. It is important in these cases to keep the wound dry between the time the operation is completed and the dressings applied. For this purpose the wound may be packed with antiseptic gauze or sponges, and pressure made by the assistant during the introduction of the sutures, which are to be rapidly tied down after the packing is removed, the pressure being maintained until the dressing is complete. The collection in the wound of blood and serum is thus prevented, which, if present, not only prevents primary union, but offers a most favorable soil for the growth of germs, if any have gained admission to the wound. If any proof of the inutility of constant drainage is needed, the experiences of abdominal and pelvic surgeons abundantly suffice. A most noticeable fact is the now infrequent use of the drainage-tube by these specialists. At present the following may be considered the best practice: the most perfect disinfection possible of the skin of the patient and the hands of operator, perfect sterilization of instruments, dressings, ligatures, and sutures, preferably by a suitable form of heat, the avoidance of strong germicides after the skin is opened, keeping the wound as dry as possible, avoiding unnecessary drainage, and the securing of perfect skin apposition.—*University Medical Magazine.*

How to Remove Aniline Stains from the Hands.—The stains used in microscopic work are sure to leave their mark on the hands of the operator, and those who use pyoktanin, in ordinary practice, seldom escape the evidence of their manipulations. A little alcohol, or hydrochloric acid, will generally remove the greater part of these dyes, but, to do it completely, some bleaching agent is required. Sodium hypochlorite, in the form of Labarraque's solution, or that of the calcium salt, are quite effective, but leave behind the very disagreeable odor of these compounds. Unna has lately recommended a method which is convenient and unobjectionable. The hands are first washed in a solution containing a little—say five per cent.—of common salt, and then in hydrogen peroxide solution, of about the same strength, being finally wiped with a cloth moistened with alcohol.—*Canada Lancet.*

The Next International Congress.—Italy is actively preparing for the International Congress of Medicine and Surgery to be held in Rome in the last week of September, 1893. Throughout the peninsula the medical schools are constituting local committees for their adequate representation at that "parliament of the profession," the last announcement to this effect having come from Pisa, where Professor Pasquale Landi has been elected president, Professor Gaetano Rummo, vice-president, and Dr. Gustavo Gasperini, secretary, of a very strong "comitato," consisting of fourteen prominent physicians and surgeons belonging to that school.

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Original Articles.

THE RESULT OF EXAMINATIONS OF SEWER-GAS WHICH ESCAPED IN TENEMENT AND PRIVATE HOUSES, WHEREIN CASES OF DIPHTHERIA OCCURRED.[1]

BY LOUIS FISCHER, M.D.,

INSTRUCTOR IN DISEASES OF CHILDREN, NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL; ATTENDING PHYSICIAN TO CHILDREN'S DEPARTMENT GERMAN POLIKLINIK; RESIDENT FELLOW ACADEMY OF MEDICINE, ETC.

THE question which confronts us frequently is, How is diphtheria developed? and another, of equal importance, is, How is it that diphtheria most frequently infests those portions of the city wherein we have an overcrowded, an improperly fed, a poorly clothed, and a mass of people whose sleeping apartments are badly ventilated? Then we have the facts that most people invariably close their windows and doors at night to avoid "catching cold," as they term it, but prefer to inhale the stifling odors emanating from one another's breath, or expired air, and if, as it is at present, the sink is near the bedroom, and all sewage and refuse has been emptied into it, we know also that they inhale all sorts of noxious odors therefrom. Can we not infer from this that some micro-organisms escaping in this sewer-gas, if present, might be inhaled? Clinically we recognize the condition known as carbonic-acid-gas poisoning, which is produced by inhaling air expired from the lungs and inhaled continually, producing that drowsy condition or heaviness on arising in the morning.

The following case occurred in November, 1891. I was summoned to attend a child in Avenue A, and after a careful clinical examination diagnosed the case as diphtheria. Upon inquiring into the cause of this infection I found that this child (an only child) was not exposed to any other sick child suffering with diphtheria, that the mother and father were perfectly well, and that no reasonable cause could be assigned to this sudden development, but the mother informed me on the following day that she had learned from another tenant that a child had diphtheria the winter previous, which lived in the same apartment, that another case developed within a few days on the floor above and on the floor below on the same side of the house.

The diagnosis was satisfactorily settled clinically, and finally verified bacteriologically. Upon examining the apartments occupied by this family I found that they consisted of a sitting-room, a kitchen, and a bedroom, the kitchen intermediate between sitting room and bedroom, and in this kitchen there was a pump to serve fresh water, and a sink to catch all soiled water. Underneath this sink there is a trap which serves as a reservoir to absorb noxious gases coming from the sewer. When, however, this is not flushed with water or infested with polluted water this will settle in the trap and only require the heat of a stove, in winter, to develop these germs. This trap then answers the purpose of a culture-medium, for some time ago a plumber showed me a layer of mud three-fourths of an inch deep, in one of these traps, which was nothing less than filth, which was constantly precipitated by water flowing through this trap or pipe. So we now have the following factors:

1. A sudden development of diphtheria in a previously healthy child.

2. The existence of a stench arising from sewer-gas in the same room wherein our patient sleeps and lives, especially on stormy days, and coexisting poor ventilation.

3. The fact that cases of diphtheria have previously developed at different times in this same house on different floors.

During a general discussion on diphtheria in the Section of Pediatrics of the New York Academy of Medicine, February 11, 1892, I said that I had collected germs in the air of rooms where diphtheria existed, and in an adjoining room, some of which were the Klebs-Loffler bacilli, others of a different nature. Culture-tests were made and the animals died with the usual symptoms.

This had occurred in tenements where the disease broke out successively on different floors and was seemingly spread by way of the sewer-pipe leading up through the house. On the other side of the hall diphtheria did not break out.[1]

Let us consider how diphtheria develops and then we can reason.

Suppose a child is sick with the disease, the mother or nurse attending it will naturally, during the disease or after it terminates in health, or if fatal, wash its clothes, and this soiled water is poured away—where? Into the waste-pipe.

If the child coughs or has its throat swabbed the cuspidors are ordered to be cleansed with water; the refuse is poured into the waste-pipe. Even though some carbolic acid may be used with it, ninety-nine times in one hundred it is wanting.

Some time ago I made a very interesting observation: A child with septic diphtheria had been ordered local applications of tanno-glycerin, applied with a camel's-hair brush. This brush always removed pieces of membrane containing these virulent bacilli, and the physician, expecting great success from his treatment, had ordered that the camel's-hair brush be taken to the water-pump and plenty of water allowed to run through the fibres to thoroughly cleanse it. How successful he was I might tell you when I took the brush and made some cultures from a few bristles and found them swarming with bacilli, dust cocci, and other micro-organisms. This taught me two things, first, that tannin was useless in the treatment of diphtheria; second, the danger arising from swabbing a diphtheritic throat with a camel's-hair brush.

Now, how frequently do we have pieces of diphtheritic membrane coughed up while we examine our patients, and how many pieces of membrane may be so discharged, and again, remembering younger children cannot expectorate, but swallow the membrane, and either have a diphtheritic gastritis develop, which is rare, or, which is the most common, have the diphtheritic membrane pass through the intestinal tract and to be evacuated at the movement of the bowels. Should membranes, then, be evacuated with the fæces, where do they go but into the sewer or closet?

Frequently I have seen children, after examination of the throat, cough or hawk and spit on the floor, sometimes in houses having carpeted floors and sometimes on bare floors; this is not immediately cleansed, and the membrane drying will allow numbers of bacilli to be liberated, which through inhalation can cause a direct infection.

[1] Read before the Section of Hygiene, New York Academy of Medicine, November 23, 1892, with demonstrations and stereopticon illustrations.

[1] See report in the Archives of Pediatrics, March, 1892, p. 219.

When we consider how many millions of bacilli are contained in these membranes it is easy to understand why some few might not be exterminated and maintain vitality enough to again develop.

When Does Diphtheria Mostly Appear.—A. Jacobi ("Treatise on Diphtheria," p. 50) says: "Filth contributes to the generation of diphtheria as it does to dysentery and typhoid fever. He also says (p. 33) that the majority of cases have occurred in winter and spring.

If this be so where do you suppose the patients are infected? Do you believe they are infected on a cold day in the street outdoors where we have plenty of ventilation, or would it be more rational to suppose they were infected in a warm room in winter?

We know if we wish to develop the bacillus of diphtheria that we must place our cultures in the thermostat and have it warm, or nothing will grow.[1]

The Method of Examination.—Koch's method is to examine the air contained in a certain room by allowing it to come in contact with narrow glass cylinders containing sterilized nutrient gelatine, and after a certain length of time the gelatine is covered with cotton and the colonies are allowed to grow, after which they are examined. In this way colonies grow—they can be counted and studied.

This procedure has been modified by Hesse, who uses glass tubes, 70 ctm. long and 3.5 ctm. wide. He sterilizes them in steam and allows the gelatine to congeal on the sides of the cylinder by turning in ice-water, and thus have a uniform film on all sides of the tube. He

Fig. 1.—Eighteen Hours' Growth from which Various Micro-organisms were Obtained, Among them a Pure Culture of Typhoid Bacilli.

then allows the suspected air to pass through, and in this way the germs are collected and examined, if present. For a more detailed description of the method, including experiments, I would beg to refer you to essays by Dr. S. Guttman, of Berlin, printed by Thieme, Leipsic.

In the same way as gelatine can be used we can use agar-agar as a nutrient film, and for my experiments I have preferred agar, although some experiments were equally successful with gelatine.

I covered the perforated funnel leading to the pipe with a Petri glass, which was covered with a layer of agar-agar (sterilized), and fastened it to the trough by a layer around the outer border of collodion—or sometimes paraffine, previously melted.

This was left *in situ* about two days, giving careful direction not to disturb this by either allowing water to flow over or otherwise.

After a few days I noticed a distinct growth. I transferred the Petri glass to the thermostat and then allowed my colonies to grow. To my surprise I was gratified to find colonies of almost a pure culture of streptococci, staphylococci, and in one case the characteristic Löffler bacillus. This found, I proceeded to test the virulence of the germs by inoculation. A rabbit weighing four pounds was inoculated in right pleural cavity with germs of Löffler bacillus and died with characteristic symptoms of diphtheritic infection, *i.e.*, effusions into pleura, hemorrhages, and also paralysis; locally at seat of the inoculation a small membranous deposit was found.

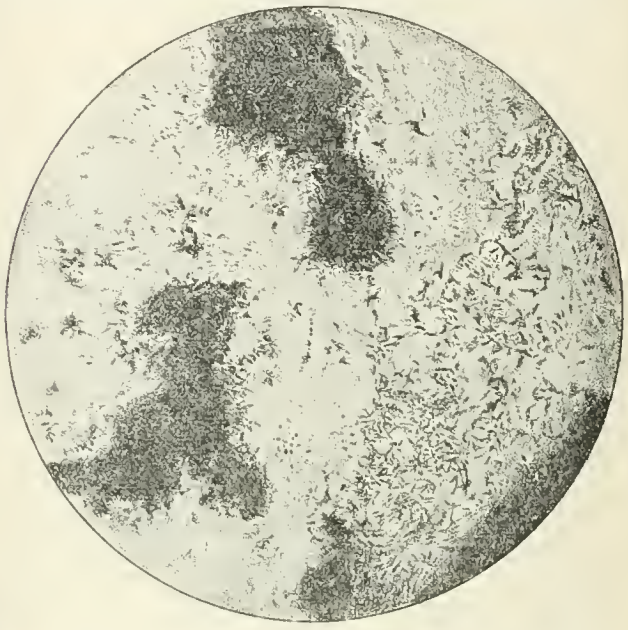

Fig. 2.—Pure Culture of Two Days' Growth of Löffler Bacilli. The thickened portions are large numbers of colonies.

This is a culture made from agar exposed over a sewer-trap, where the smell of escaping gas was perceptible. You can see different colonies of germs, some of which are the characteristic diphtheria bacilli, others cannot be readily differentiated, for I would add that there are dozens of micrococci and also bacilli which vary but little in size and shape, and can only be properly recognized after a thorough examination, including inoculation on animals to find the virulence if present.

The streptococci caused death in one rabbit and also in a dog weighing five pounds after three days. A cat inoculated on the third day of the growth did not succumb. This latter experiment I might omit, owing to extreme difficulty in handling the animal, which I finally etherized and then inoculated. I concluded there might have been a slight immunity caused in this animal (cat) by the etherization and consequent ether drunk.

In July, 1891, while taking a course in bacteriology at the Hygienic Institute at Berlin, we were taught an improved method for collecting germs found in the air in the halls and on the stairs and in the cellars. Several days previous to this we were working diligently with the anthrax bacillus and here and there a bacillus was found in some of the jars exposed. A warning given to us was that all members of the class using tobacco should not smoke their cigars and lay the stump on the table, for fear of carrying the anthrax bacilli from the cigar to the mouth.

Again, while I was experimenting with the Emmerich bacillus, or as it is sometimes called bacilli neapolitanus, we could occasionally find it in the air during the same day and on the following day, by exposing plates or glass jars which were previously carefully sterilized and then covered with a sensitive film of blood-serum (sterilized),

[1] Vide my paper on An Early Method of Diagnosis in Diphtheria, Medical Record, December 5, 1891.

or gelatine or agar-agar, or even sterilized potato which was properly peeled and cut in two. These were then exposed from morning to evening in a room, or closet, or cellar to be examined, and in this way conclusions reached as to purity or impurity of the air. To develop these micro-organisms, it is necessary to put these exposed jars or plates or tubes into the thermostat and allow them to grow about twenty-four hours in a temperature of 90 to 110° F. If our method was carefully applied and our working utensils were sterile, we frequently got negative results. Of 85 experiments performed by me, 45 must be excluded, owing to carelessness at the different houses and breakage of plates. Of the remaining 40, 12 yielded pathogenic bacteria, 8 different micro-organisms (non-pathogenic), and 20 were negative. Although these germs will retain their vitality at lower temperatures, they develop spontaneously at higher temperatures, and it is interesting to note that bits of diphtheritic membrane have been found alive six and seven months after being coughed.

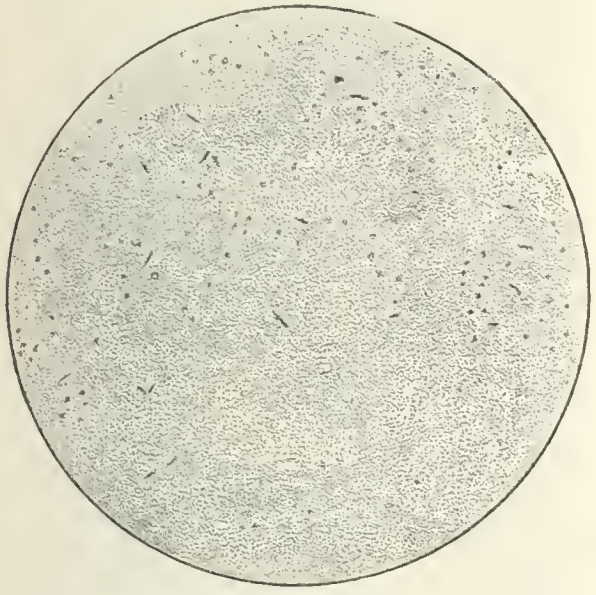

FIG. 3.—Micrococci and Bacilli from a Tenement Sewer Infected with Diphtheria.

Dampness and darkness seem to keep the germs alive and favor their development, and although some germs will die soon, it has been found that membranes kept in damp cloths and others enveloped in absorbent cotton seemed to live for months.

Cultures of diphtheria made in agar will keep alive in the laboratory for half a year and longer, yielding the germ peculiar to the growth only, *i.e.*, the Löffler bacillus.

Now, do micro-organisms develop different diseases under different conditions, *i.e.*, does a germ sometimes develop typhoid, the same germ diphtheria, or scarlatina, or measles? My answer is, Not any more than we should expect to have potatoes grow from pumpkin seeds.

Some time ago I inoculated the vagina of a guinea-pig with a virulent culture of diphtheria. After a day a large grayish-white membrane appeared, which on examination yielded Löffler bacilli.

I some time afterward performed tracheotomy in a large rabbit, and inoculated it with diphtheria. It promptly died in about twelve hours of paralysis, and the seat of inoculation yielded Löffler bacilli.

Control Experiment.—I then performed tracheotomy on another rabbit and dressed the wound antiseptically. This latter rabbit got entirely well and was quite lively when I last saw it. In order to make comparative tests and examinations I resorted to the method used by Professor Koch and called control experiments. This consisted in examining a place where I was sure that sewerage was perfect, and examining in the same manner. I also examined the sewerage of the babies' wards in connection with the Post graduate Hospital buildings, and received negative results as to pathogenic bacteria.

Finally, it all resolves into a question of seed and soil, for if we have a child or an adult with a debilitated condition (subnormal, let us call it), then the chances of infection of the soil by the seed is indeed great. Flies have long been known to be the carriers of infectious diseases and of infectious material, and recent experiments in cholera Asiatica have shown that flies can not only carry the spirillum cholera, but give pure cultures of living bacilli after five or six hours.[1]

Mistakes that might happen during my investigations are the possibility of introducing pathogenic germs, but these experiments were carefully conducted and were not performed in a pathological laboratory, but in the small laboratory adjoining my office. The incubator used was sent to me by Dr. Baginsky, of Berlin, and was used for these experiments only.

According to what I have said this evening and the proofs submitted, we are justified in accepting the following:

That there seems to be a relationship existing between the infection of some cases of diphtheria on the one hand, and the escape of sewer-gas loaded with pathogenic micro-organisms on the other hand; that there are means at hand for examining these organisms, and that although the method applied by me has been used by many others, there has appeared no record of the same in this country.

That cases of diphtheria developed by escaping moist sewer-gas containing Löffler bacilli seems to have been proven I need only refer to the case I mentioned in detail, in which not only one child was infected, but that families having lived there previously, two years before the other family the winter previous, had cases of diphtheria occur, one of them fatal.

It is also necessary for me to state that if a child or an adult has a weakened throat due to hypertrophied tonsils, previous attacks of diphtheria, catarrhal pharyngitis, naso-pharyngeal catarrh, vegetations, or laryngitis, or the existence of anæmia, or a generally debilitated system, that such persons could more easily be infected owing to a previously weakened or diseased condition giving a better soil for the germ development.

Recapitulation. — 1. In all, 85 different places or houses having sinks with traps were examined: Of these I will eliminate 45, owing to disasters in handling, or introduction of foreign material into a previously sterilized culture-medium. Forty examinations are entirely reliable, and I was greatly aided by competent people in avoiding breakage and introduction of filth. Twenty of these exposures were negative, 12 yielded pathogenic bacteria, 8 more pathogenic micro-organisms, principally fæces bacilli, and numerous foreign bacilli, micrococci, and saprophytes, which could not be differentiated.

2. Some of the 12 specimens containing pathogenic bacteria yielded diphtheria bacilli (Klebs-Löffler), one of them typhoid bacilli in almost pure culture, associated fæces bacilli and other cocci.

3. In 3 specimens I had streptococci, and in 4 specimens staphylococci, which could be easily distinguished and cultivated in the usual manner.

4. My animal experiments were very interesting, and instructive, and aided me in determining the pathogenic condition of the bacilli, especially in one case which died of typical paralysis of legs.

List of Demonstrations.—1. Baginsky's thermostat.

2. Test-tubes containing cultures.

3. Large test-tube with gelatine coating, showing colonies.

4. Petri glass: *a*, sterilized gelatine; *b*, inoculate with suspected colonies; *c*, freeze the film; *d*, cultivate in thermostat.

5. Microphotographic preparations have been very carefully prepared under the tutorship and kind advice of

[1] See October number of Deutsche Med. Wochenschrift.

Professor Oscar Mason, of Bellevue Hospital, who prepared all the negatives and positives and made the prints which I show you this evening. With the aid of the stereopticon you can readily appreciate the smallest germ and some very indistinct colonies, and I now show you the first specimen.

If tubercle bacilli can infect after sputum dries and liberates tubercle bacilli, does anyone doubt that a membrane expectorated onto bed-clothes, or onto the floor, or on the carpet, and then thrown into the sink, might not in a warm room be again liberated and inhaled? Nobody has ever seen a single tubercle bacillus in the air with the naked eye—nobody has ever seen a single Löffler bacillus. Then we are forced to resort to methods which might capture these germs and so form our own conclusions.

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ARTHROPATHIA TABIDORUM (CHARCOT'S JOINT DISEASE).[1]

By ALBERT E. STERNE, M.D.,

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When Dr. J. K. Mitchell first sought to establish for many forms of joint-disease a neuropathic origin his communications attracted considerable interest in the medical world. Soon, however, his teachings were neglected, and forgotten. In 1831 Mitchell published[2] several cases of joint trouble due to spondylitis, and two years[3] later others due to trauma. He thought, therefore, that other forms of arthritis, rheumatic in nature, had a like etiology.

Nevertheless he deserves the credit, generally attributed to Gull—who made public his experiences some years later[4]—of having correctly interpreted the connection between lesions of the nervous system and the arthropathies which might ensue in consequence thereof.

In 1846 Scott Alison[5] called the attention of physicians to affections of joints which developed in hemiplegia, wrongly attributing them, however, to the lithic diathesis from which his patients happened to be suffering.

Brown-Séquard, Charcot, Weir Mitchell, and others then showed that joint troubles often arose during the course of myelitis, hemiplegia, spinal tumors, progressive muscular atrophy, and after trauma.[6] Charcot, however, was the first to treat of those curious joint affections which supervene in tabes dorsalis, to give a distinct description of them, and to try to explain their occurrence. In his classical articles[7] of 1868 and the following years he called the attention of medical men to the arthropathies of patients suffering from locomotor ataxia, affections which he thought to be new, and to which he gave the name "*arthropathies tabétiques.*" English and American authors call this form of joint-affection "Charcot's disease."

Since that time the liveliest interest has been shown in these affections. Especially in Charcot's native land there arose great enthusiasm for his teachings. In Germany his views were for many years accepted only with reserve. Meanwhile the most prominent English authors were freely expressing their opinions upon this subject. How general the interest felt for the new teachings was, is proven by the long-continued discussions of the Clinical Society of London in 1884. Buzzard[8] particularly deserves credit for his efforts to spread more widely the views of Charcot.

Curiously enough, American authors have either seen very little of these affections, or else they have felt loath to publish their experiences. Very few contributions from our country have swelled the list of cases of arthropathia tabidorum, though the same has reached the stately figure of some two hundred and thirty observations. It might therefore seem needless to add one more to the list of communications upon this subject. The divergence of opinion regarding the pathological changes of the affected joints, the causes for their development, and still more the obscurity surrounding the relation between joint-affection and locomotor ataxia justify this paper. A thorough perusal of the literature and several original unpublished observations of this most interesting malady form the foundation of the following clinical and pathological-anatomical study.

The clinical picture of arthropathia tabidorum is most characteristic. Even where complications tend to make faint those outlines which Charcot established from his first observations it is generally easy to discover those symptoms which might be termed pathognomonic. They are briefly as follows

A joint until then free from any signs of disease becomes suddenly swollen, seemingly without cause, preceded by no prodroma. The skin about the affected part presents no redness, though oftentimes widely distended veins can be seen. The whole process takes a course free from signs of fever or pain, although as a rule an effusion, often of enormous dimensions, into the affected joint takes place. The tumefaction usually spreads over the neighboring parts. This swelling has not the character of common œdema—finger-pressure leaves no traces, but resembles rather a dense infiltration.

As a fact worthy of note may be mentioned that the infiltration first invades those parts in the immediate vicinity of the affected joint. Very soon it spreads rapidly, then remains stationary, often for weeks and months, and finally gradually diminishes. When the size of the joint is again nearly normal it becomes possible to determine the characteristic changes of the bones and other parts forming the joint. In an immensely enlarged cavity, the thickened ends of the bones may be felt. Oftener still, however, a considerable diminution of these structures may be noted. Free bodies often lie within the joint. Even the position formerly occupied by these *corpora libera* may sometimes be determined. Abnormities of position, luxations, and subluxations, due to the elongation of the ligaments, are quite frequent. These luxations, to be sure, can easily be reduced. Simple traction restores correct position, which, however, becomes lost as soon as the restoring force is no longer exercised. The lack of pain allows continued use of the diseased joints, so that at last they may reach that flail-like state which Charcot aptly termed *jambes du polichinelle*—jumping-jacks legs. That such joints must be analgesic is apparent from the use to which the patients subject them. Special attention should be paid to the peculiar cracking and grinding sounds which issue from the affected part on active and passive movements. They frequently form an early symptom, one which often first attracts the attention of the patients to the disease from which they are suffering. These sounds undoubtedly indicate that pathological changes have already taken place in the mechanism of the joint. Briefly, the symptoms which are more or less pathognomonic of a tabetic joint-trouble are: seemingly sudden, spontaneous beginning; absence of the usual signs of inflammation, of fever, and of pain; the tendency toward effusion into the joint, and later to the formation of deformities, to luxations and subluxations; and most important, the tendency to resorption and disappearance of parts of bones, and also to production of new bony tissue within and about the affected joints.

The clinical picture given above is that established by

[1] Extracts from this paper were read before the Association of American Physicians of Berlin, July, 1891.

[2] Mitchell: On a New Treatment in Acute and Chronic Rheumatism, American Journal of the Medical Sciences, vol. viii., p. 55, 1831.

[3] Ibid., 1833, p. 360.

[4] Gull: Guy's Hospital Reports, third series, vol. iv

[5] Lancet, 1846, vol. i., p. 227.

[6] Mitchell, Morehouse, and Keen: On Gun-shot Wounds.

[7] Charcot: Sur quelques Arthropathies qui paraissent dépendre d'une Lésion du Cerveau ou de la Mœlle épinière, Archives de Physiologie normale et pathologique, 1868, p. 161.

[8] Buzzard: Lancet, 1874, p. 261; ibid., 1880, pp. 208 and 235; Transactions of the Pathological Society of London, 1880, p. 193; British Medical Journal, 1881.

Charcot[1] as typical for the *arthropathies tabétiques*. It is that, too, most frequently met with. However, by no means all cases take such a characteristic course, a fact to which Charcot himself first called attention. Many variations present themselves. In the first place, such cases may be mentioned which impress the observer as modified forms of arthritis deformans, or sicca. These have, however, no such abrupt beginning, present signs of inflammation, and are usually extremely painful. The general condition of the patients becomes more or less influenced for the worse. Such symptoms, as we have seen, are nearly always absent in the true arthropathies of locomotor ataxy.

Secondly, in many instances, the process should from its origin be termed arthritis traumatica. An initial injury is either reported voluntarily, or else can with more or less certainty be elicited. To be sure these traumata are often very slight, for instance, protracted standing upon a ladder, pressing together of the legs in a spasm of pain (Vulpian), biting upon a piece of sugar (Ancelin), etc. (cf. also the cases of Czerny[2] and Bernhardt[3]). On the other hand, such injuries often take place as could easily cause—even in healthy persons—a joint disease, or a fracture. This leads me to speak concisely of those remarkable fractures which have frequently been observed in tabes patients since Weir Mitchell reported them in 1873. They are called "spontaneous" fractures. Either no causes can be given for this occurrence, or they can scarcely be termed pathological, representing, as they do usually, normal actions, such as sitting up in bed, reaching for some object, etc. The tonic and clonic convulsions to which tabes patients are often subject may also present the etiology of these fractures (Westphal). Naturally, more violent injuries may have happened. It seems but just, however, in consideration of the comparative frequency of such accidents in conjunction with tabes, to assume a connection between them and the fundamental affection. According to Charcot, in every ten cases of tabes there occurs one case of fracture or arthropathy, even multiple in the same individual.[4] Many patients volunteer the information that several days before the occurrence of these "spontaneous" fractures, they had experienced an excess of "lancing" or, oftener still, "boring" pains. The spontaneous ruptures of ligaments[5] repeatedly reported in tabes, and those peculiar affections of the jaw bones, first described by Vallin in 1879, whereby progressive atrophy and destruction of the alveolar processes, combined with falling out of the teeth and sequestration in the jaw bones, takes place, are probably based upon the same cause. These facts point with certainty to an abnormal condition of the bone substance. Established histological and chemical changes in the structure of the bones afflicted[6] probably form its anatomical basis. Primarily, disturbance of nutrition due to the degeneration of the respective nutritive nerves—a point to be more thoroughly discussed—had caused these changes.

The most constant and startling symptom of such fractures is their painlessness, similar to that of the arthropathies. In both cases analgesia of the deeper-lying tissues, especially of the periost is indicated. Remarkable stories are told of the contortions to which patients subject their broken limbs. In truth it is a curious sight to see how these sick play with their freshly broken bones, rubbing the fragments upon each other to produce cracking sounds, etc. As a matter of course, where such conditions are present the diagnosis becomes very easy. Where locomotor ataxia had until then not been suspected, they are of eminent importance. In some few cases the fractures were more or less painful.[1] Therefore in every case of spontaneous fracture the possibility of tabes should not be neglected. Curiously enough, these fractures possess a considerable tendency toward healing. Even many cases of rapid consolidation, with exuberant callus formation, have been reported. This abnormal callus production was formerly considered characteristic of tabetic fractures. However, though frequent, its occurrence will scarcely prove the rule, and where it exists may justly be looked upon as the expression of inefficient treatment, or to the rubbing together of the fragments. Caution should be exercised in the prognosis, for in spite of the tendency to union, many cases of protracted consolidation and pseudarthrosis have been reported. Certainly the decrease in calcic phosphates, united with an increase of fats, are factors of importance in the production of new bone.

As regards the seat of such fractures and the time of their occurrence, the former may be situated in any bone,[2] and take place in any stage of tabes—even before the slightest trace of ataxy is shown.

Fractures and arthropathies seem to me to bear to each other near relations. They have analogous, if not identical, causes. If these attack the diaphysis they produce a fracture; if the epiphysis then, at least, an arthropathy may ensue.

To return to the arthropathies which we left while speaking of the different modes of origin, these can be best demonstrated by cases.

Case I.[3]—The patient, a coachman, became afflicted suddenly, without apparent cause, in 1868, with an affection of the right knee-joint, in which at no time before anything abnormal had been experienced. At that time, 1868, no symptoms of tabes were present. Only one fact besides the arthropathy spoke for locomotor ataxy, namely, some seven years previously patient had suffered for three or four months from diplopia. Thence he remained well during seven years, until the appearance of the arthropathy, which developed in a characteristic manner, suddenly, without known cause, free from signs of fever, of pain, or of inflammation of the skin, warranted the diagnosis "tabes." The use of an apparatus enabled the patient to pursue his vocation as cabman during six years. In 1875 he was received into the nervous ward of the Berlin Charité, where the following symptoms were established: Advanced ataxy of the lower extremities; intensely disturbed muscular sense (sense of relative position); both more marked upon the right side, where also the knee-affection was situated. Inaccurate tactile sense, hyperalgesia with temporary retarded perception for pain and skin reflexes, disturbed thermal faculty, involuntary convulsions, and absence of patellar reflexes completed the picture of fully developed tabes. The right knee excessively deformed, swollen. Freely movable bodies lie within the joint, whence cracking sounds issue upon movements, active and passive.

We have here an exquisite example of prodroma in

[1] Charcot: Arch. de Physiol. norm. et pathol. 1868, p. 161.

[2] Czerny: Uber neuropathische Gelenkaffect, Arch. f. klin. Chir., 1886, Bd 34, Heft. II.

[3] Bernhardt: Berl. klin. Wochenschrift, No. 28.

[4] Cf. case Coteret (Charcot).

[5] Lepine (Bull. de la Soc. Anat., p. 745, 1873) describes a case of rupture of the quadriceps ligament. Hoffmann (Berl. klin. Woch., 1885, No. 12) reports a rupture of the Achilles tendon. Rupture of biceps tendon reported repeatedly.

[6] Gazette hebdomadaire de Med. et de Chirurgie, 1881, p. 216. The changes in the histological structure of the bones in tabes, according to Blanchard, consist of dilatation of the Haversian canals, which may combine and form large cavities. This process of resorption is most evident in the vicinity of the bone-marrow, decreasing in intensity toward the periphery. Where the surface is attained, the bone presents a toothed, rough, porous appearance. In a fresh specimen the widened canaliculi are filled with fat, a fact which speaks for the chemical changes reported by Regnard, viz., increased percentage of fats, with a decrease in calcic phosphates, from 48.2 per cent. normally to 10.9 per cent. The carbonates and chlorides and the ossein undergo no diminution.

[1] Cf. Leroy: Des Fractures chez les ataxiques. Thèse. Paris, 1883. Case X.

[2] According to the statistics of Kredel (v. Volkmann's Sammelung klin Vorträge, No. 309, p. 2897) the fractures were distributed upon the different bones as follows: Femur, 32 (collum femoris, 9); tibia and fibula, 19; ulna and radius, 6; humerus, 4; clavicle, 3; pelvis, 3; scapula, 2; fibula, 2; lower jaw, 1; radius, 1. Of these 22 were on the right, 25 on the left side. The others not mentioned. Twice complicated fractures took place, the one with favorable termination (Czerny), the other with lethal exitus (Fere). Other authors report similar statistical figures and location. Krönig reports 3 fractures of the vertebral column, Pitres et Vaillard of 2 such.

[3] Westphal: Berl. klin. Wochenschrift, 1881, No. 29.

tabes. Transitory diplopia[1] and complaints of cold feet were the only signs present until an arthropathy became developed.

The following, one of Charcot's first observations, is perhaps the most interesting case of tabetic joint and bone affections recorded.

Case II.—Patient, Madame C——,[2] had suffered from locomotor ataxy for twenty-two years. Disease began in 1850 with "lancinating pains." In 1857 the right hip-joint became suddenly tumefied, unaccompanied by pain, fever, or inflammation—in short with those symptoms which we have described as typical for arthropathia tabidorum. A year later luxation of this joint occurred. The same fate befell the other (left) hip in the following year, so that the patient was no longer able to walk without aid. When lying abed, however, she could still move her legs powerfully. Movements were excessively ataxic and so free in every direction, that Charcot likened the limbs to those of a jumping-jack—"*jambes de polichinelle*." Patient could place her leg behind her head, whereby one day she fractured her left femur. In 1866 the arms became the seat of fulgurating pains, but at no time whatsoever were they subjected to ataxy. During a

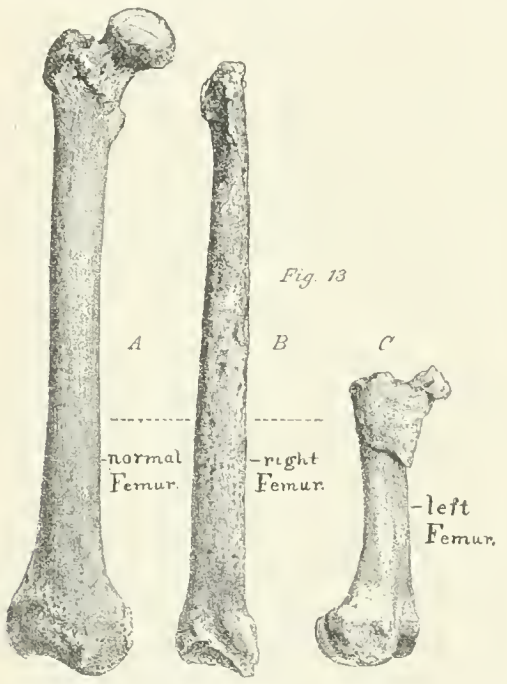

Fig. 1.—Femurs of Madame C—— (after Charcot).

period of seven years her condition remained about the same. Then occurred in rapid succession the following mishaps: In 1873 a fracture of both bones of the left fore arm took place, which healed rapidly with malformation of callus. Since that time an abnormal half-flexed position of the fingers had established itself. Three months later a similar fracture of the other forearm occurred, with exactly the same result, though no deformed callus had been produced One month later a typical arthropathy of the left shoulder with luxation took place. At the same time patient suffered from an attack of double vision. Finally, about three months later, cracking sounds were heard upon movements of the lower jaw, the joints of which became the seat of abnormally free motion.

Charcot calls especial attention to the seemingly motiveless occurrence of all of these accidents. The arthropathies were sudden, typical in their advent, the fractures "spontaneous." The anamnesis contained no data for heredity, lues, gout, or rheumatism, nor were any signs of osteomalacia, even upon the pelvis, to be found.

[1] Westphal relates also another case of transitory diplopia, which occurred twelve years before any sign of tabes could be discovered.

[2] Charcot: Archives de Physiol. norm. et pathol., 1854, p. 166.

The foregoing is a most instructive case, not only on account of the multiplicity and character of the arthropathies and fractures, but also because the occurrence of the several affections falls in different periods of the disease. The legs were in the ataxic state, whereas the arms were free from symptoms of incoördinate movement. The influence of ataxy could be readily discerned in the pathological-anatomical changes. These were very much more marked in the joints of the lower extremities. The proximal end of both femurs especially was destroyed. One of these bones had lost head, neck, and a portion of the shaft; the other had been deprived of far more bone-substance still. Both, however, showed to a marked degree that form which French authors term "drum-sticks"—"*bagnette de tambour*." Still one other example of typical joint affection in the early stages of tabes may be given. Its subject, a female patient, was presented to the notice of the Surgical Congress, held in Berlin, 1887, by Sonnenburg,[1] after she had been under observation for several years.

Case III.—Mrs. F——, aged forty-four years. No hereditary disposition, or venereal infection. In 1876 "lancinating pains" set in; soon afterward disturbance of bladder function. In 1877 patient lost her front teeth, and portions of the superior alveolar processes without known cause. The teeth of lower jaw soon followed. In 1882 tumefaction of the right knee-joint occurred, though no traumatism had preceded. In 1886 nearly all the symptoms of tabes were present: Westphal's phenomenon; difficulty in passing urine; atrophy of optic nerves; Argyll-Robertson pupils, but absolutely no sign of ataxy either in gait or movements. The right knee-joint, which had remained sound for a long time after the first puncture in 1882, showed recurrent swellings. These did not wholly disappear, but caused patient very little inconvenience. The joint is smaller, the capsule thickened but flabby, exudation minimal. Movements free; toward the sides excursions are excessive, flexion for more than right angle hindered. Loud cracking sounds emanate from the joint on movement, though no free bodies can with certainty be determined.

Measures: Above patella, right, 32 ctm.; left, 29 ctm. At tibial epiphysis, right, 31 ctm.; left, 27 ctm. The joint affection, in this case also one of the first symptoms of tabes, took a benign course throughout the disease, a condition of things which would certainly rapidly become changed for the worse should ataxy make its appearance, as Sonnenburg remarked.

The above cited cases have in common an early development of the several joint affections, at a time when the locomotor ataxy was in its very beginning, or had, before the advent of the arthropathies not been diagnosed. This præatactic development of arthropathies is of importance, inasmuch as the recognition of these joint affections in their real significance is at such a time more difficult than when many symptoms of tabes lead to correct diagnostic views. Then, too, these initial affections are more capable of bringing eventually more clearness into this subject, than those which occur in the later tabetic stages, *i.e.*, in about one-half of all cases.

Unfortunately, all cases of tabetic arthropathy do not follow the typical course described above. The varieties are many, too manifold, certainly, to depict here. Two categories, however, deserve a closer inspection; the one on account of its infectious character, the other on account of its similarity with arthritis deformans. From the latter, however, such cases nevertheless possess striking differences, to be more particularly spoken o later.

Of the first category the following case, reported by Bourceret,[2] is a classical example.

Case IV.—Female patient, forty-six years of age, afflicted with tabes with slight grade of ataxy. Suddenly left

[1] Sonnenburg: Arch. f. klin. Chir., 1887, Bd. 36; pp. 142–143 (cf. Taf. iii., Fig. 3, idem).

[2] Bourceret: Société anat., 1875, p. 334.

leg refuses its functions, hip and gluteal region become immensely swollen. Patient also had a left-sided cystovarium. Fever, retentio urinæ, etc., set in, with lethal exitus after a few months. Three days before death tumefaction of left knee-joint was noticed, increasing constantly. Autopsy: Cyst of left ovary; in the spinal cord, degeneration of posterior columns and roots; left hip-joint showed vast changes; the head and two-thirds of neck of femur had disappeared; cavity enlarged, filled with great quantity of pus, which was present also between the muscles of the thigh and the fibres of the gluteal muscles (suspicion of a capsular rupture seemed not to have been entertained); in the recently diseased knee-joint large quantities of pus were also found. It can be scarcely doubted that we have to do here with a case of secondary infection in a primarily serous exudate. Sufficient cause was certainly given by the presence of the ovarian cyst.

Extremely divergent from arthropathia vera is a case described by Oppenheim and Siemerling.[1] In a female patient several joints were affected and were from the beginning extremely painful. The pain became so intense that active movement was avoided. Complaints were first made in November, 1882, of shooting pains in the right arm, especially about the shoulder and elbow-joints. Then the joints of the lower extremities became affected. Last of all the foot-joints became the seat of deformities. Autopsy: In the joints of the legs and in shoulders hemorrhagic contents, synovia swollen, thickened and highly vascularized, the capsule of foot-joints was distended ad maximum by a bloody exudation, the cartilages were worn away at various points; considerable usury, as well as proliferation of the cartilages of metatarsal and tarsal bones was apparent; in the left hip numerous spongy growths upon the synovial membrane with many newly-formed blood-vessels were present; cartilages here intact; the spinal cord showed advanced tabes, with degeneration of nerve fibres in the posterior gray substance; nerves of lower limbs hardly changed.

If the above case be considered as one of tabetic arthropathy, its explanation is very difficult. It certainly offers many points of contrast with the cases already cited.

The original observation immediately to be recorded seems very nearly typical in comparison with the last reported instance of joint trouble. With several others it forms the basis of this communication. Affording the best opportunity for study, it will be the only one of those cases I have observed to be detailed here.

The patient was under observation for more than seven months in the nervous ward of the Royal Charité in Berlin. At the end of that time his condition became such as to necessitate his removal to the Dalldorf Insane Asylum, where he still lives.

Case IV.—August W——, received into the internal station November 12, 1890, transferred to the ward for mental and nervous diseases (department of Professor Jolly) December 17, 1890. Patient a mason, is married, but has had no offspring. No history of nervous or mental maladies in his family. Venereal infection and alcoholism denied. For six years patient has suffered from shooting pains in the limbs and head. The right knee especially was attacked. In 1889 a heavy stone fell from a height of seven metres upon his head, inflicting a wound 4 ctm. long upon the forehead. Though the blow produced no unconsciousness, patient has since its occurrence suffered more than before from pain in the head and the limbs. Since Christmas, 1889, he has been unable to work. Fits of dizziness and unconsciousness set in in August, 1889. Since then, too, he has been much troubled by constant buzzing in the ears and by attacks of mental confusion. Soon after his reception these latter became so frequent as to compel his removal to the psychiatric ward in December. His intelligence decreased steadily, memory became weaker, ideas of self-grandness set in. At present the patient presents the complete picture of dementia paralytica. Later he became exceedingly aggressive. Speech disturbed, slow.

Status, April 8, 1891.—The above demented condition rendered difficult the physical examination, which resulted as follows: Rhomberg's symptom merely indicated. Argyll-Robertson pupils. Accommodative func-

Fig. 2.—Arthropathy of the Right Knee. Case of August W——.

tions sometimes incomplete, often absent. On being stretched out the tongue trembles excessively, but does not deviate from the median line. The outstretched hands tremble violently. Tendon reflexes abolished; cremaster reflexes present. Disturbance of sensation marked, often heightened skin reflexes. No disturbance in the functions of the sphincters; the internal organs present nothing abnormal. Pulse regular, of good quality. No arterio-sclerosis.

The right knee is immensely swollen (*vide* cut), the articular ends of the bones enlarged, the skin of normal color, elastic and easily movable. The joint is luxated *ad laterale*, so that the entire limb forms a line outwardly convexed, *i.e.*, a veritable genu varum. Movements therein are free; toward both sides excessive. Extension good; flexion, however, is limited to an angle of ninety degrees. In walking, the calf of the leg becomes bent upon the thigh in such a manner that the two parts form almost an acute angle. Nevertheless, patient walks remarkably well, with perfect steadiness. Not even a suspicion of ataxy can be discerned. Said knee-joint feels hard to the touch, on movement loud sounds issue therefrom and the palpating hand experiences a sense of grinding and crunching as if foreign bodies were lying free within the joint. Owing to the bone-like resistance which the whole joint presents, it is, however, impossible to determine positively the presence of such *corpora libera*. Circumference above patella; right knee, 46 ctm.; left, 37½ ctm. All other joints appear normal, no sounds issue from them on movement, nor can grinding be felt.

[1] Arch. f. Psychiatrie u. Nerven-krankheiten, 1887. Heft I. u. II., Fall., i.

The dementia present in the above observation, though giving it a heightened interest, is of no seldom occurrence in connection with tabes. The gross pathological changes of the afflicted joint, however, are of uncommonly high degree. Unfortunately, from a scientific standpoint, they cannot be described more minutely at present. Regarding the beginning of the disease but very inaccurate data could be obtained. It seems, however, that the commencement of the knee trouble was rather more gradual than usual and combined with long-continued pains. To-day the patient complains no longer of any pain whatsoever in the joint, it is totally analgesic. What other symptoms of locomotor ataxy were present at the time of development of the arthropathy could not be elicited. Certainly one incoördination of motion was absent.

Before abandoning the general part of my paper, I should like to refer to one question: Have we in these joint-diseases, the course and conditions of which are so very different, to do with one and the same pathological process, or shall we consider, with Rotter and others, that in many instances we are dealing with joints already diseased, though only to such an extent as to cause no previous symptoms? Several facts speak for the latter hypothesis. Westphal long ago remarked that emission of peculiar crackling sounds upon movement in the joints of tabetic individuals was of no uncommon occurrence. He was himself inclined to look upon these sounds as indicative of changes already produced as prodroma of possible arthropathies. Such a view certainly deserves consideration. Especial attention should be devoted to the initial stages of these affections, wherever it be possible to observe them. Such cases afford better opportunity of studying and controlling the causes which influence the course of these arthropathies. That the matter is of extreme practical import everyone will doubtless admit. The recognition of such causes as may be of disastrous influence, and the possibility of their exclusion, is for the patient a weighty thing.

Not to be overlooked is the possibility that a joint, later the seat of an arthropathy, had already suffered, perhaps only to a slight degree from the effects of syphilis, since this disease now plays such a rôle in the etiology of tabes. To be sure it would be very difficult to prove the above supposition. The mere fact, however, that antiluetic therapy may have no effect upon the process is by no means conclusive, as Weizsäcker [1] and others contend. The beginning pathological alterations may have been placed years before, just as those in the cord which afterward favor the development of tabes may have been set. In this manner syphilis may be supposed to render the tissues more susceptible of subsequent diseases. With the greatest possible conciseness the symptoms and the pathological anatomical changes of arthropathia tabidorum will be more particularly treated.

Commencement and course are in so far characteristic as that the latter is extremely rapid and the former sudden. Over night the tumefaction in the vicinity of an afflicted joint may become excessive. The effusion into the joint may reach enormous dimensions. Such is, however, not always the case. Many instances have been made known where the hydarthros was but slight, as in arthritis deformans. It has been repeatedly observed that the swelling was most marked in the immediate vicinity of the diseased part. This fact has been brought into connection with the exudation into the joint cavity. Puncturing at a point of most marked swelling, Debove[2] found a synovia-like fluid from a region of fluctuation under the pectoralis major (arthropathy of shoulder-joint). Debove concluded that the fluid obtained originated in the joint, *i.e.*, that capsular rupture had taken place. Rotter [3] also reports two instances of rupture of the knee-capsule. Thus it seems probable that the tumefaction in the region of an affected joint is due to the presence of fluid forcibly pressed through the break in the walls of the joint into the surrounding tissues. The peculiar board-like infiltration, so different from common œdema, speaks for such a supposition. Charcot formerly considered this dense infiltration of the periarticular region as characteristic for joint diseases of neuropathic origin. It is, however, probably analogous to that condition described by v. Volkmann as occurring after traumatic intracapsular fractures (Kredel). That also would be in concurrence with the idea of capsular rupture.

Rational Treatment.—Compression, immobilization, rest, etc., usually causes the tumefaction, and later also the hydarthros, to recede slowly, but steadily.

As has been already signified, generally no cause can be given for the occurrence of the affection. The sick are themselves surprised to see their swollen joints, for they do not feel them; *i.e.*, the whole process is painless, a peculiarity characteristic of tabetic arthropathy. On the other hand, as has been demonstrated, both of these characteristic features—the sudden commencement and the lack of pain—may fail. Naturally, when analgesia makes its *début*, the pain vanishes.

The exudate is usually serous, sometimes hemorrhagic, seldom purulent. Where suppuration is present it is generally secondary. Infection may be caused either by puncture, by decubitus, mal perforant, or some other process (cf. case of Bourceret, above). A hint of practical value is given by a case which Roser reports. An arthropathy of the foot led, after years, to the development of abscesses and fistula, in which tuberculosis was proven.

The seat of the arthropathies is usually in the large joints. Smaller joints are nearly always spared. However, probably no joint of the human body is immune. Some seem to be decidedly preferred. So above all the knee.[1] Perhaps the explanation should be sought in the anatomical structure, the peculiar mechanism, and in the weighty functions of this part. Oftentimes symmetric joints become affected, very frequently multiple joints, so in one case, seven. For the right or the left side there exists no preference.

Dependent upon the seat of the affection the course taken by it acquires certain peculiarities. It seems the joints possess the power to influence materially the aspects of the disease, as if they set conditions, which, as it were, hemmed or guided the same. So, for instance, the resorption of bone-tissue reaches a far higher degree in both spheroidal joints—hip and shoulder—than in the others.

To exemplify this condition it may be well to present here the peculiar picture which arthropathies of the metatarsal joints show. They differ somewhat from that which has been called typical, though they, too, follow a certain type. As a subdivision this affection of the foot-joints was dubbed "*pied tabétique*" (Charcot). The process begins much as in other parts of the body, less suddenly usually, but otherwise offers the criterions before described. Pathognomonic for "*pied tabétique*" is the position acquired by the foot, similar to congenital flat-foot. Most striking are the changes (Charcot et Féré) undergone by the inner side, the dorsum, and the planta of the foot. The inner side and the dorsum show protuberance, whereas the sole becomes flattened. Almost regularly we meet with luxation of the first cuneiform bone and a peculiar, dough like thickening of the periosteum which simulates often deformity and hypertrophy of the skeleton.

The functional disturbances caused by the tabetic foot naturally vary with each case, depending upon the grade of destruction and deformity presented. Inasmuch as

[1] Weizsäcker: Brun's Beiträge zur klin. Chir., III.
[2] Debove: Arch. de Neurol., 1881, p. 76.
[3] Rotter: Arch. f. klin. Chir., 1887, Bd. 36.

[1] Again using Kredel's figures, as when speaking of the spontaneous fractures, we find the arthropathies affecting the different joints as follows: Knee, 104; hip, 56; shoulder, 36; ankle, 25; foot (pied tabétique), 16; elbow, 15; toe-joints, 10; finger-joints, 8; jaw, 2; hand, 2; vertebral column, 1.

the patient experiences no pain, sometimes such affections are scarcely heeded. More generally, however, the gait becomes impaired, or even impossible.

When the small joints of the fingers or toes become affected the symptoms resemble, clinically and pathologically, those we usually see in arthritis deformans. Pain, inflammation, and redness of the skin are present, and

Fig. 3.—Tabetic Foot "*pied tabétique.*" Copied from Rotter's plates.

the general condition of the patient becomes more or less influenced by fever, symptoms usually absent in arthropathies of other joints.

French authors have attempted a clinical division into benignant and malignant cases. Such a classification is, however, hardly tenable, for the simple reason that the so-called benignant cases recur so frequently as to become malignant, that is, they leave pathological changes in the joints attacked. We have to do here, as in most other diseases, with light and severe forms, which for prognostic purposes may be separated.

The pathological anatomical changes met with in arthropathia tabidorum have given rise to much scientific discussion. Do these changes form a process *sui generis*, or should they be looked upon as known processes altered by a disease —tabes—which sets other conditions for their development?

Fig. 4. Skeleton of Tabetic Foot, Showing the Extent of Destruction. (From Rotter's plates.)

To me it seems advisable to make the following distinction: Those affections characterized by excessive resorption and disappearance of joint-parts should be classed together as an atrophic form In contradistinction thereto stands the group of hypertrophic affections, bearing the chief mark of arthritis deformans—newly formed bone. As a subdivision of the latter form the intra-capsular fractures may be regarded, since these usually show the characteristics of arthritis deformans also.

Those light cases which *intra vitam* gave either no or only slight signs of their presence, should be first considered. Such have been examined by Jurgens, who found the following conditions: In nearly all larger joints of tabetic patients the capsule was found dilated and the ligaments elongated, though the synovial fluid was not increased in quantity. On the contrary, a decrease was often apparent. The synovialis showed over-filled and widened blood-vessels, the synovial membrane and the intra-capsular ligaments (ligamenta cruciata of knee, lig. teres of hip) were of dark-red hue. Histologically the nuclei of the connective-tissue cells were split into numerous rod-like fragments. What pathological significance such a change possesses I do not know. Virchow, too, holds those changes which the cartilages show to be primary, *i.e.*, as arthritis deformans, and once demonstrated a specimen in which only this tissue was affected.

On the other hand, Féré describes exactly the contrary. Intactness of cartilage, with complete resorption of lig. teres and development of a small exostosis upon the hinder edge of the acetabulum characterized his specimen.

The changes most peculiar to arthropathia tabidorum are shown by those joints of which parts have become resorbed. This process often attains a very high grade. Not only the entire epiphysis, but also considerable portions of the diaphysis may disappear. This fact is demonstrated exquisitely by the case of Madame C——, aldreay described. The one femur, which had lost head and neck, measured but 50 ctm., whereas of the other femur only 19 ctm. were left unresorbed. A normal, fully developed femur has a length of about 60 ctm. To be sure such extreme instances are rare. However, loss of entire epiphyses has been frequently reported. With a certain regularity does this occur in arthropathies of the shoulders and hips. Doubtless the notoriously poor nutrition of these parts, making them more liable to destruction, explains this fact. So, too, do other forms of joint disease, tuberculosis for instance, cause more havoc in these than in other joints. Head and neck of humerus, resp. femur usually become resorbed, often with astonishing rapidity.

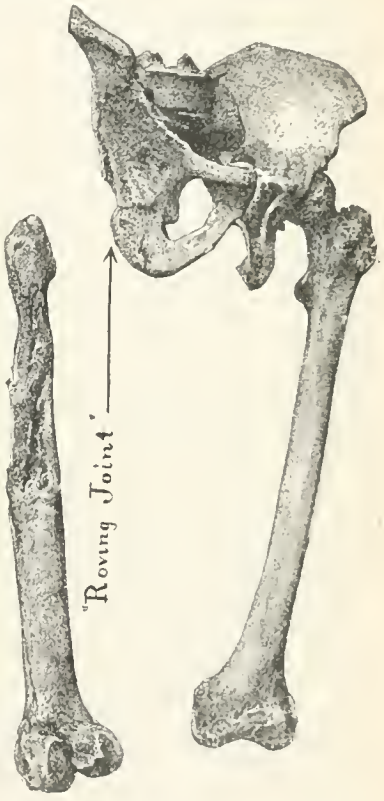

Fig. 5.—From a Preparation of Sonnenburg.

Sometimes, however, this does not take place, as in the cases reported by Féré and Hutchinson, where the detached head of the femur remained unchanged in the glenoid cavity. The long bones usually show the *baguette de tambour* form. Defects of cartilage and bone, thinning of the edges, etc., comprise the changes ordinarily presented by the articulatory surfaces. Usually this occurs only to a minor degree. In rare cases, however, extensive destruction takes place upon scapula and pelvis.

Féré reports an example where the neck and cavity of both scapulæ had disappeared. Sometimes the acetabulum becomes so widened as to form a veritable "roving-joint," "*Wander-pfanne*," as the Germans say. Sonnenburg[1] reports a case in which a femur of the drumstick

[1] Sonnenburg: Arch. f. klin. Chir., 1887, Bd. 36. Cf. Taf. III., Figs. 1 and 2.

sort occupied a glenoid surface upon the pelvis 20 × 40 ctm. in dimensions. Of the acetabulum proper nothing could be seen.

But this kind of destruction confines itself by no means to shoulder and hip alone. Raymond describes an exquisite knee-joint affection of this sort. Not only had the condyles vanished, but the tibia also had suffered immense loss of substance. The knee-pan was diminished in all dimensions.

In elbow affections the proc. olecrani generally remains spared, whereas the rotula and trachlea show partial resorption, and the normally thin, bony plate at the base of the fossa olecrani is usually perforated. Entire small tarsal bones fall a prey to resorption or "*pied tabétique.*" Of the less frequent occurrences may be mentioned the loss of the zygomatic process and—as far as the coronoid incision—the joint process in an arthropathy of the lower jaw (Féré); here the articulatory surface upon the temporal bone was double the normal size.

Pitres et Vaillard record the partial disappearance of a vertebra (cf. Case XI.). Most interesting is the fate of two great toes, the one of which had already lost its basal phalanx, whereas the other, whilst under observation, was undergoing a similar destruction. Neither abscess nor fistula were present.[1]

The above process of bone resorption Charcot considers a distinctive feature of tabetic arthropathies. It forms the fundamental basis of his views that these affections are peculiar. Therein they show their difference from arthritis deformans Destruction and resorption of bone give tabetic arthropathies their special character, whereas production of new bone distinguishes arthritis deformans.

If such a distinction be maintained, how, then, are the numerous cases which present the following hypertrophic form—a perfect contrast to the preceding—to be accepted?

Clinically they show enlarged joint-ends, formation of intra- and extra-capsular bone masses, and often begin with pain and inflammation. The observation reported by me is an example of this category. These affections have two peculiar features—their resemblance to arthritis deformans pathologically, and the frequency with which they are complicated with joint-fractures. The latter may be either primary or secondary. That is to say, the fracture may become the etiological factor of arthritis deformans, or else the latter sets such changes as allow, through minimal causes—probably mostly traumatic—a fracture to take place.

As the term implies, hypertrophy of the joint-parts occurs here. The cartilage proliferates, those well-known marginal ridges become formed, most markedly in the knee, in which joint this type can best be studied. Splitting and usury of the cartilages at the points of contact, together with production of bone in and about the joint, present curious deformities. There the bones are deprived of their cartilaginous covering, eburnation frequently takes place, and new articulatory surfaces become formed. Sometimes the tissue becomes porous, seldomer dense and ivory-like. Various authors record the presence of freely movable extra-capsular bony masses, lying usually in closé vicinity of the afflicted joint. Probably they owe their existence to the tearing off of a small fragment from the shaft through muscular contraction. Constant irritation, permitted by analgesia, subsequently urges these fragments to rapid growth, so that they sometimes reach remarkable proportions, in one case the size of the palm of the hand was attained (Rotter).

Changes, more or less advanced, are to be noted upon the synovialis and capsule. The latter becomes dilated, thickened, ofttimes impregnated with osseous tissue. The synovial membrane presents an array of villous growths, which when they attain a certain size may become detached, and remain as free bodies within the joint.

[1] Chouppe: Soc. anat., 1873, p. 758

The same pathological changes, perhaps in more advanced conditions, are met with in those cases where intra-capsular fracture had taken place. Corpora libera are nearly always present. Sometimes only small pieces of bone, sometimes whole condyles, even entire epiphyses may be broken off and split into fragments (cf. case of Beusch-Wolff described by Rotter). As will be seen, the free bodies may arise from two different sources—as fragments of fractured bones and as detached villous growths from the synovialis. Both kinds may of course be present in the same joint.

The peculiarity of the hypertrophic arthropathies seems to me to lie in this formation of free joint bodies, which, if they are at all present, are resorbed in the atrophic form. Upon what causes this difference depends I am unable to say. To some extent they become resorbed also in the hypertrophic form, as do, fortunately, also the extra-capsular masses of bone. Atkin relates that an egg-sized osseous mass which lay in the popliteal space disappeared after months. Kredel[1] records similar experiences.

How shall we explain these affections? Just here we meet with extreme difficulty, here the views of the best authorities conflict. In contemplation of the manifold variations which these processes present, this is hardly surprising. On the contrary, it seems almost impossible to adhere to one opinion solely. Unfortunately, considerable confusion has been brought into the matter by the numerous cases which have been wrongly published under the name of "Charcot's disease." I feel no desire to classify these cases in detail. It seems to me necessary, however, in order to gain a clear insight into the subject, to separate all cases into two great groups: 1, Such as without violence to judgment may be considered as arthritis deformans, modified only through the complication with tabes; and 2, such as seem to be peculiar to tabes itself.

Those who consider all of these affections as belonging to arthritis deformans will doubtless object to such a classification. Of them I ask whether any disease whatsoever—in the present instance, tabes dorsalis—has the power to change a chance joint-affection in such a typical manner that the usual marks of arthritis deformans can no longer be recognized? On the other hand, I must confess until now no absolute proof of direct, intimate connection between tabes and arthropathy has been brought forward. This could be done only through experiment. Unfortunately, however, no one has as yet succeeded in producing an artificial tabes.

The majority of renowned pathologists, among them Virchow and Ziegler, hold arthropathia tabidorum to be a process identical with arthritis deformans, although the end results seem so different. They contend that the primary changes are those in the cartilages, then follow the synovial, the capsular, and lastly the extra-capsular alterations. In other words, the chain of events is precisely that of arthritis deformans, with the difference that in arthropathia tabidorum the whole process is hastened and more severe. Concisely stated, it is a hyperplastic process with secondary degenerative atrophic destruction, which makes the final result so very peculiar. It is not to be forgotten, however, that the above view is formed entirely from the stand-point of the pathologist, who investigates the nature of a disease from the lesions that mark it, wholly disregarding any clinical peculiarities which may have accompanied the process during life.

For this reason the above view has many adversaries. Their opinion is, to be sure, not based entirely upon the pathological anatomy of the disease, but is by no means destitute of such foundation. Charcot himself leads this school.

Many years ago he pointed out with all clearness the great difference between his arthropathies and arthritis deformans, or "sicca." His opinion was founded not alone upon clinical observations, but also upon post-

[1] Kredel: v. Volkmann's Sämmlung klin. Vorträge, No. 309.

mortem conditions. In this disease commencement was sudden, painless, unaccompanied by symptoms of fever, or disturbed general condition. In arthritis deformans severe pains, which had been the torture of the patients for years perhaps before recognizable pathological changes were placed, ushered in a trouble bearing the marks of a febrile process. When pathological changes take place, they have entirely different aspects. In arthritis deformans almost invariably proliferation of bone and cartilage takes place, whereas in arthropathia we find usury and resorption—a general waste of these tissues. It should be remembered, however, that, as a rule, we have to do with advanced cases, in which the primary alterations can no longer be determined. Charcot, too, admits that both diseases have many points in common. The writer doubts not that many so-called cases of "arthropathies tabétiques" are processes identical with arthritis deformans, inasmuch as the latter disease may attack a person already suffering from locomotor ataxy, or *vice versa*. He is, nevertheless, convinced that the vast majority of cases are in some way peculiar to tabes, that there exists an immediate, more or less dependent, connection between them and the central nervous lesion. Wherein is this connection to be sought?

Two theories which could have explained such a relation unfortunately proved groundless. The first of these, brought forward by Charcot many years since, was based upon anatomical alterations. He repeatedly found atrophy and disappearance of the ganglion cells in the anterior cornua of the cord, whereupon he informed the medical world that upon these degenerative changes the arthropathies depended. Charcot himself let his theory drop as soon as cases became known in which these ganglionic cells were intact.

Buzzard set up a theory for the existence of a centre of joint diseases in the immediate vicinity of the vagus centre. He erroneously believed the arthropathies were associated especially with the gastric crises of tabes. This very convenient supposition lacked all anatomical corroboration.

The other hypotheses established to explain the connection between joint and spinal trouble have more or less anatomical basis. The rarifying ostitis and the fragility often found in those bones in which spontaneous fractures and arthropathies were located, present the possibility of more intimate connection between joint-fracture and joint-disease. The latter is certainly often a consequence of the former, but only in the minority of instances. They do not, however, stand to each other in the relation of cause and effect, but are, it seems to me, due to like causes.

Rotter,[1] at a meeting of the Berlin Medical Society in 1886, declared three factors were responsible for the development of atropathies: 1, The ataxy; 2, the analgesy; and 3, the brittleness of bone. Of these three factors, one—the analgesy—at least must always be present.[2] This view has its weak points. In the first place, as we have seen, ataxy need not be present, and as a matter of fact fails in about one-half of all cases, as a thorough study of the literature of the subject reveals. Inco-ordinate movements, the tearing and pulling of capsule and ligaments, the absence of hemming apparatus, represented by intact ligamentous structures, tend to aggravate the destructive process. That the influence of ataxy lies herein the experience of many close observers proves. Joint affections, before benign in their course, often become exceedingly malignant after the advent of ataxy. Well adapted to disprove the etiological importance of ataxy and analgesy, is a case for many years resident at the Berlin Royal Charity, a case which has afforded material for many interesting observations regarding tabes. In spite of extreme ataxy and analgesy, an arthropathy of the knee has entirely disappeared. That conditions favorable to further development were given, an immense elbow-joint affection seems to imply.

The analgesy and the brittleness of bone are also factors of extreme importance in determining the course of an arthropathy. Again, they should be regarded not as causal moments, but as symptoms pointing to the real cause. This seems to me to be a disturbance of nutrition which the tabes patient underlies, making him especially susceptible to all sorts of injurious influences. The tendency to decubitus, to cystitis, to mal perforant, and the falling out of teeth, also the sequestration of the proc. alveolares and the dystrophia of the nails amply verify this fact.

The skeleton undergoes, in consequence of this nutritive disturbance, an alteration in its anatomical structure and chemical composition, as already detailed. The analgesy denotes that the current for sensitive impulses of pain has been broken. Moreover, the explanation for this condition is to be found in a degeneration of the peripheric nerves.

The history of peripheral neuritis is comparatively recent. Still, as early as 1844, Steinthal[1] discovered optic neuritis, a condition corroborated by Bourbon[2] in 1861. Soon afterward a case of fibrous alteration in the muscular branches of the sciatic nerve was published by Marotte.[3] Then came Friedreich in the following year (1863), with an instance of atrophy of the hypoglossal, crural, and brachial nerves, in which corpora amylacea were found. Westphal[4] subsequently reported atrophy of the sciatic and tibial nerves in a case of combined posterior and lateral sclerosis.

Pierret, of the University of Lyons, should, however, be regarded as the founder of the modern school, which attributes greater importance to peripheric nerve-lesions in the symptomatology of tabes. In a note to Dr. Robin[5] he declared that all cerebral and spinal nerves, could, like the optic, become the seat of neuritis during locomotor ataxy. A year later, at the International Medical Congress in London (1881), Pierret took occasion to vindicate his views.

Following this initiative Dejerine,[6] Pétres et Vaillard,[7] Oppenheim and Siemerling,[8] published new and important proofs for the existence of peripheric nerve-degeneration in tabes. These investigators especially have brought this school of teaching to its present height.

The pathology of peripheric neuritis is briefly as follows: To the naked eye the nerves seem but little altered. Microscopic examination of cross-sections, which had before been hardened in Müller's fluid, or of loose fibres picked from pieces macerated for twenty-four hours in a one to two per cent. solution of osmic acid reveals changes usually of a parenchymatous nature, seldomer of interstitial. Many nerve fibres appear simply degenerated, others have wholly disappeared. One finds different stages of degeneration; fragmentation of myeline into clumps, into small balls, into fine granules, and finally no myeline at all. In the latter stage we find only the empty neurilem sheaths, the little "sun-spots" one sees normally are gone. Naturally in one and the same nerve these different conditions may be found together. We meet atrophic and degenerated fibres side by side, or perhaps separated from each other by several empty nerve-sheaths. A fact of importance is the presence of fibres in a state of regeneration. Thereby the possibility of restitution and cure is given, and an explanation of otherwise inexplicable circumstances, such as the healing

[1] Rotter: Arch. f. klin. Chir, 1887, Bd. 36, pp. 1-71.

[2] Sonnenburg: Berl. klin. Wochenschrift, 1888, p. 978, describes a case of arthropathy in an early stage of tabes where not only the ataxy and the fragilitas osseum, but also the analgesy failed.

[1] Steinthal: Hufeland's Journal, 1844.

[2] Bourbon: Arch. Gener. de Méd., November, 1861.

[3] Marotte: Union Médicale, 1862.

[4] Westphal: Arch. f. Psychiatrie und Nervenkrankheiten, 1878, Bd. 8, p. 469.

[5] Pierret: Des Troubles oculaires dans les Maladies de l'Encephalie. Paris, 1880, p. 327.

[6] Dejerine: Revue de Méd., 1888.

[7] Pitres et Vaillard: Revue de Méd., 1886, tome [illegible] p. 574.

[8] Oppenheim und Siemerling: Arch. f. Psychiatrie und Nervenkrankheiten, Heft I.-II., 1877.

of spontaneous fractures, the union of resected joint-ends, etc., offered.

Seldomer production of interstitial tissue about the fibres (perineuritis) takes place. In accordance with the lesser frequency of disturbances of the arms in tabes, the nerves of these extremities partake less in the above changes. All qualities of nerves may become affected. The cutaneous, however, usually are most diseased, doubtless owing to the preponderance of disturbance of tactile sense. But mixed nerves, branches to muscles, and also the recurrens and vagus, have been found altered. Almost invariably the grade of degeneration increases from the periphery toward the centre, so that the proximal nerve-end may be altogether spared, while the distal is very markedly diseased. With very few exceptions, where the neuritic changes were located in the middle of the nerve, the highest degree of degeneration is to be seen at the periphery.

It appears that the neuritis of the peripheric nerves is not necessarily parallel to the grade of degeneration in the spinal cord. As a rule, the former is of lighter character. The contrary may, however, prove true (Oppenheim). We must, therefore, ask whether the neuritis peripherica be the direct consequence of the central lesion. The fact that asymmetric, even unilateral peripheric, alterations may be combined with perfectly symmetric cord degeneration certainly speaks against such a relation. It seems to me very probable that both the central and the peripheric lesion are local signs of the same disease—locomotor ataxy. A direct, dependent, connection need not exist between them, though it can by no means be taken for granted that such entirely fails. Tabes dorsalis evidently sets up two distinct lesions in the nervous system, the one central in the cord, the other in the peripheric nerves. Moreover, both lesions are probably constant, and each is responsible for certain symptoms to be observed in tabes.

The so-called cardinal symptoms—the Argyll-Robertson pupil, the ataxy, the "lancinating pains," and absence of patellar reflex—are doubtless due to the central lesion. All other symptoms may be attributed to the peripheric lesion, among them the disturbances of sensation—anæsthesia, the "*plaques d'hyperæsthesia*," the feeling of creeping upon the skin, the local pains, and the analgesy.

As shown by Oulmont,[1] in 1877, the anæsthesia usually occurs in the form of circumscribed patches or "*plaques*." Déjèrine found the nerves from the patches degenerated. This fact was exquisitely demonstrated in a case (IX) recorded by Pitres et Vaillard. Sensation for pricking remained intact in the right leg, but upon the left the morphium syringe used was no longer felt. The post-mortem examination showed nerves of right leg normal, nerves of left degenerated. But also for such trophic troubles as mal perforant, the falling out of teeth and nails, and what concerns us more nearly, for the arthropathies and spontaneous fractures, as occur with tabes, should we hold the peripheric nerve-degeneration responsible.

Probably those distressing gastric and laryngeal crises so common in tabes, are due to a like cause. In one instance where these symptoms were combined with aphonia, atrophic degeneration of the n. recurrens and vagus was found. The central origin of these nerves was perfectly intact (Oppenheim). To prove absolutely the importance of peripheric nerve-lesion in the production of arthropathia tabidorum is as yet impossible, as I have already confessed. The warmest adherents of this school of teaching admit that these affections can undoubtedly be dependent upon the central lesion, but hold to the peripheric so long as a medullary cause cannot be proven.

Unfortunately this view has its weakness also, namely, just those authors who have striven most to establish the doctrine of peripheric neuritis in tabes have proven its presence in numerous other diseases, moreover, those from which tabes patients usually die, *i.e.*, tuberculosis, typhoid, and other infectious fevers, cachexies, marasmus, and other conditions of inanition. The adversaries of the above school therefore contend that the peripheric degeneration is due to some other trouble than tabes. Idem, it should not be forgotten that the most marked changes were found in those nerves which normally innervated the region afflicted. So in arthropathies the articular and periarticular, with spontaneous fractures, the nutritive, and in the anæsthetic zones the cutaneous nerves, suffered most.

In the light of this clash in views, the writer considers himself doubly fortunate in being able to refer to affections of joints which seem to present perfect analogues to those which occur in tabes. These are the arthropathies which develop often during the course of lepra anæsthetica. Their existence has been known for a long time. Charcot[1] mentions them, Jgalmar Heiberg[2] has described them. According to the latest (not yet published) investigations, these affections are based upon neuritis of the periarticular nerves. This information I owe to the personal communication of Dr. L——,[3] of Bergen, Norway. During his term of service in the hospital of that city he had the opportunity of seeing and studying many patients suffering from leprosy. The arthropathies which occur with this disease are reported to bear a striking resemblance to the tabetic, not only in their symptomatology, but also in the pathologico-anatomical conditions of the joint-ends. Here, too, exists the same curious tendency to resorption of these parts. Though proliferation of bone also takes place, usury of this tissue supervenes, just as in arthropathic tabidorum. Secondarily, in connection with this leprous joint trouble, degenerative changes have been, though seldom, found in the spinal cord, similar to those of tabes. From the foregoing it can be scarcely longer questioned that arthropathies may be due to neuritis peripherica.

A case briefly detailed will add weight to what has been already said:

Case XII. (of Pitres et Vaillard[4]). *Advancea Ataxy, Arthropathies of Both Hip-joints and Vertebral Column; Spontaneous Fracture of Left Leg; Extensive Changes in the Nerves of the Lower Extremities, especially in the N. Nutritis tibialis; Previous History.*—Marie C——, aged sixty-six, received, in November, 1885, on account of fracture of left leg. Patient married at thirty-two years of age. Miscarried once; another child died a few days after birth. In 1860, at the age of forty-one, painless luxation of right hip occurred, without traumatism. Long-continued bandaging and immobilization proved fruitless. Patient could walk still with aid of cane. Limb shortened. After a short time she became suddenly humpbacked; a gibbus was formed. About the same time she suffered from a short fit of "lancinating pains" in legs. In 1871 walking suddenly became more difficult. Thenceforward patient could move about only when leaning upon a chair, which she pushed before her. In November, 1885, after fourteen years' duration of above condition, a slightly painful spontaneous fracture of left leg, acquired as patient was about to retire, caused her to seek the hospital.

Status, November, 1885: Fracture of tibia and fibula, between middle and lower third, left side. Fragments extremely movable. Crepitation present. The hip-joints extensively altered. Luxatio femoris on both sides. Loud cracking on motions, which are too free in all directions. Total analgesy of these joints. Vertebral column shows xyphosis of the lumbar region. Patient suffers considerably from lancinating pains in the legs, which extremities she "looses" in bed (destroyed muscular sense). Patellar reflex lost. No symptoms from the intestines. Sphincters normal. The sensibility was un-

[1] Oulmont: Société de Biologie, 1877.

[1] Charcot: Gazette des Hôpitaux, 1881, p. 26.

[2] Jgalmar Heiberg: Klinisk aarbog., 1886. Christiania.

[3] Dr. L—— intends publishing the result of his studies in the near future.

[4] Pitres et Vaillard: Revue de Méd., 1886, tome vi.

fortunately not examined. Exitus from pneumonia after two months.

Autopsy.—Gray hepatization of left lung. Typical changes in both hip-joints and of the vertebral column. Brain normal. Spinal cord, sclerosis of the posterior columns; in the cervical region tracts of Gall only are degenerated; posterior nerve-roots atrophic, the anterior normal; ganglionic cells of the anterior horns normal.

Microscopic Examination.—*Posterior Nerve-roots.*—In the cervical region some normal fibres still to be seen; in the lumbar region all fibres degenerated. No myeline can be discerned.

Nerves of Right Leg.—(*a*) *N. Obturatorius:* Many sound fibres, many degenerated, and some in conditions of regeneration.

(*b*) *N. Cruralis:* Gray degeneration of cutaneous branches. Myeline split into irregular clumps. Muscular branches almost normal.

Nerves of Left Leg.—(*a*) *N. Obturatorius and N. Cruralis* impaired as above..

(*b*) *N. Nutritius Tibiæ* is far more altered than other nerves. Almost all fibres are totally degenerated; a few appear comparatively sound. Most nerve-sheaths are empty, containing now and then some myeline.

(*c*) *N. Tibialis ant. and N. Saphenus extern.* are but little changed. Here and there atrophic, or regenerated fibres can be seen.

(*a*) *N. Plantarus internus* normal.

(*e*) *N. Vagus* appears normal.

It remains for me to devote a few words to the diagnosis, prognosis, and therapy of arthropathia tabidorum.

In typical cases the diagnosis is easy, even though few other symptoms of tabes may be present. The clinical signs—the sudden, feverless, and painless beginning and the high grade of destruction produced in a short time—are safe guides to follow. Only where we must rely entirely upon the local signs in atypical cases does difficulty arise.

Differentially it would be well to remark that in blennorrhagic rheumatism no typical deformities are present. On the other hand, inflammation, pain, œdema, and sometimes fluctuation, often occur.

Tubercular affections show the usual signs of tumor albus. Excessive pain harasses the patient long before swelling becomes apparent. Abscesses, fistula, and general waste of the part are very common. Worthy of note is the fact that a tubercular process may take root in a joint affected with tabetic arthropathy.

For *pied tabétique*, furthermore, the following processes are of differential diagnostic importance: Arthritis sicca of the foot-joints begins gradually, and takes a slow course. It seldom causes typical deformities, whereas with the tabetic foot this forms the rule (luxation of the first cuneiform bone). The localization, too, is different. In arthritis sicca usually the metatarso-phalangeal joints, especially of the big toe, are attacked.

As a matter of course all processes capable of producing neuritis, and therefore trophic disturbances, such as osteomalacia, fractures, etc., must in every case be excluded.

In accordance with the nature of the disease, a doubtful prognosis must probably always be placed. It should be remembered, however, that a proper treatment often holds such progressive affections in check, and that the sick can use their deformed limbs remarkably well in spite of the enormous destruction.

This fact should guide the treatment also. The same principles should be upheld here as for non-tabetic arthropathies and fractures, if needs must, for a long time. Should the orthopedic therapy not lead to the desired result, surgical efforts may be attempted. Herein the greatest possible reserve should be exercised. Experience has shown that good results after resections of tabetic joints are rare, far rarer than those operations made upon other indications. To be sure, various authors report successful, even brilliant results. So Wolff[1] records that after arthrectomy, not resection, upon a tabetic knee, a joint was obtained which allowed movement and long-continued use. No typical relapse occurred, but the wound broke open and fistulæ were formed. Upon the strength of this cure Wolff recommends this method of treatment, which is of course justifiable, in spite of the bad experiences of other operators.[2] One may be, however, again warned and exhorted to circumspection, choosing only such cases for operation where the tabes seems not too far advanced, and then only when the joints are so extensively demolished that even with suitable apparatus they prove unfit for use. For amputation doubtless one will not decide himself, except where urgent causes—infection, suppuration—are present. Nevertheless this operation may sometimes prove preferable to resection.

From the foregoing we arrive at these conclusions:

1. Arthropathia tabidorum and the spontaneous fractures which occur in tabes patients are trophic affections, due to a general disturbance of nutrition in a weakened organism.

2. They stand in near relation to tabes dorsalis, if not directly connected with that disease.

3. These affections have a characteristic stamp. They may be traumatic in origin; are so, however, only in the minority of cases.

4. They occur in every stage of tabes, yet seem to have a certain predilection for the pre-atactic period.

5. From a pathological-anatomical standpoint these affections should be considered in part as peculiar, their classification as arthritis deformans is not permissible. In part, however, they may be regarded as examples of the latter disease, and their commencement is often an intracapsular fracture.

6. The cause of these conditions is to be sought for in a degeneration of the peripheric nerves, a lesion probably constant in tabes. Furthermore, the neuritis of the spinal nerves stands to the sclerosis of the posterior columns of the cord as does the neuritis of the cranial nerves to the cerebral lesion.

7. The ataxy, the analgesy, and the fragilitas osseum are factors which influence considerably the course of these affections. They cannot, however, be looked upon as their causes. Each of these factors may be absent, most readily the ataxy. This fails in reality in at least one-half of all cases.

8. The therapy should be as conservative as possible. Recourse to surgical measures should be taken only in special instances.

How Cholera is Spread.—In the Half-yearly Report of Sickness and Mortality among the servants of the East Indian Railway Company, for the first half of the current year, an instructive instance of infection by cholera stools is recorded. Dr. Bathe reports that there can be no doubt that milk diluted with impure water was the cause of the outbreak of cholera last April among the European employés and their families stationed at Asansol. The milk-supply was not equal to the demand, and the only water available for its dilution was procured by digging holes in the bed of a small river, at a spot where the excreta of several cholera patients had only a day or two previously been thrown. Almost all those who suffered from cholera had partaken of this milk. At Jamalpur a native child, suffering from cholera, was seen by Dr. Brooke lying on a bag full of rice, and the choleraic dejecta were soaking through the gunny bag into the rice. Had this rice been sent on to some distant place where no cholera existed, and had cholera supervened on this rice being distributed and eaten, we might have been treated to various theories as to the origin of the epidemic; but it is very doubtful if the simple explanation of the choleraic dejecta of this child would have been hit on.—*Indian Medical Gazette.*

[1] Wolff: Berl. klin. Wochenschrift, 1889, p. 105.
[2] Cf. Müller: Archiv. f. klin. Chir., xxxix., 659.

PYOKTANIN IN EAR DISEASE.

By NATHAN S. ROBERTS, M.D.,

NEW YORK.

SOMEWHAT more than a year ago Professor J. Stilling, of Strasburg University, introduced to the notice of the medical profession a new drug which he called pyoktanin, from πῦον = pus, and κτεινω = kill, and claimed for it remarkable efficacy in surgical diseases attended with suppuration, especially those of the eye. (See *Merck's Bulletin*, June, 1890.) Numerous communications have since appeared in medical journals detailing their authors' experiences with this drug, and as is the case with most new remedies, it is by some lauded to the skies and by others found useless or positively harmful. Thus in the MEDICAL RECORD of July 5, 1890, Dr. Adolph Kessler, says: "Pyoktanin interferes with the causation of suppuration in every form and shape I have thus far met with," and relates cases exemplifying its superior efficacy in suppurating wounds and ulcerations. In the RECORD of July 12, 1890, p. 47, it is stated that experience in the surgical policlinik of Dr. Kölliker, of Strasburg, with the use of pyoktanin, has given entirely negative or unfavorable results. Again, August 23, 1890, p. 214, "Dr. Braunschweig calls attention to the disagreeable symptoms of irritation which are produced, and the small degree of success he obtained with it." In the same number of the RECORD, Dr. Robert Barclay, of St. Louis, contributes two cases of chronic otitis media suppurativa in which remarkable success seems to have attended its use in solution of 1 to 1,000.

Hoping to satisfy myself, at least, as to the place and value of this new remedy in suppurative ear disease, I began in the Fall of last year to treat a number of the cases presenting themselves at the Vanderbilt Clinic, and also a few in my private office. Some of my colleagues and Dr. Huntington Richards, Chief of Clinic in the Department of Ear Diseases, also made what they considered a fair trial of the remedy named, and they have each come to conclusions unfavorable to its reputation.

There are so many factors influencing success or failure in the treatment of ear diseases that it requires time, patience, and judgment to decide upon the merits of a particular remedy.

Many cases require surgical procedures which, alone or with the aid of the simplest cleansing measures, will result in success, in which case the particular local remedy adopted is likely to obtain some credit.

Other ear cases are but the local expression of some constitutional cachexia, and the general treatment is all important. Then, too, the skill and thoroughness with which a given remedy is applied, the strength of the application, its frequency, and the length of time *in situ*, all influence the result.

One of the chief obstacles to obtaining reliable data is the irregularity of patients in attending, and the fact that they so often suddenly disappear from observation, and we know not whether they have become better or worse.

I have kept full notes of all cases treated, but do not deem it important to consume space by recording them in full. Brief notes of a few cases will suffice to illustrate the results of treatment with the remedy under consideration.

CASE I.—A. M——, aged eight; applied at Vanderbilt Clinic for treatment May 20, 1890. From one year of age both ears have had an intermittent, malodorous, purulent discharge in the left ear; I found two polypoid growths and some granulation tissue. I removed the growths with Blake's snare, and touched the granulations and stumps lightly with saturated solution of chromic acid. Under ordinary modes of treatment both ears improved, especially the one operated upon, but the discharge continued to some extent, and on September 2d, for purpose of comparison, I blew into the right ear a powder composed of iodoform, boric acid, and gum benzoin, and dropped into the left a solution of pyoktanin, 1 to 1,000, allowing it to remain *in situ* ten minutes.

September 6th.—Left fundus forming a bed of livid granulations, free purulent discharge, devoid of odor. From this date to October 2d pyoktanin was faithfully tried, sometimes in one ear, sometimes in both, and at this date I quote from my notes: "It is evident in this case, by comparison, that the results of the pyoktanin treatment are less favorable than those of iodoform insufflation, it is therefore abandoned."

CASE II.—Mrs. L. P——, aged thirty-one; applied September 27, 1890. Long-standing purulent discharge, sometimes bloody, perforation in Shrapnel's membrane, from which is hanging a pediculated polypus; granulations in antero inferior quadrant. Removed the polypus with the snare and injected the sinus leading up from the membrane with pyoktanin, 1 to 1,000; to douche at home with boric acid solution, a drachm to the pint.

October 4th.—Same treatment. From that date the discharge rapidly grew less under continuation of the same treatment.

October 21st.—The discharge was entirely stopped.

October 28th.—The same; watch heard at a distance of three feet.

November 14th.—The ear began to discharge slightly from the sinus, and injections of pyoktanin were resumed in connection with the home use of boric acid douches.

December 16th.—Changed to peroxide of hydrogen, and continued until December 29th, there being all this time a free discharge. On this date injected pyoktanin into the sinus by the ear pipette, warm water being used beforehand to cleanse the tract of its purulent secretion. These injections were repeated two or three times a week, and on February 10th the discharge had entirely dried up; blew in aristol and directed patient to do nothing to the ear.

February 24th.—Absolute dryness, hears the watch at five and a half feet on the right side.

Up to August 1, 1891, the secretions had not returned, and the hearing distance had improved to six and a half feet, which is remarkable for an ear in which there is little drum-membrane and the bones of the ear are bound down by cicatricial tissue.

CASE III.—Ann M——, aged seventy-three; applied January 23, 1891. Nine days ago left ear began to pain; worse at night. There is an intensely fetid discharge. To douche at home with boric acid solution, ʒ ij. to the pint, using three bulbfuls of Angelo's ear douche, and five times a day.

February 10th.—Profuse suppuration; filled the ear with solution of pyoktanin and let it remain in ten minutes.

February 12th.—The suppuration not so thick or malodorous, the tympanic cavity looks better; continue.

February 26th.—Discharge slight and watery, oozing by pulsations through a pin-hole perforation in the antero-inferior quadrant of the drum-membrane; pyoktanin, 1 to 1,000, ten minutes. The discharge continued to diminish, and on March 5th had ceased entirely, and had not returned March 26th, at which date patient was last seen.

CASE IV.—Miss A. N——, aged seventeen; applied at my office February 14, 1891. From childhood both ears had been suppurating; both canals were stenosed, the left the more so; douche applied to left ear was instantly tasted in the mouth. For five weeks this patient was treated with antiseptic douches and peroxide of hydrogen at home, as well as in the office, with considerable benefit; but on March 21st both ears continuing to discharge somewhat, I began instillations of pyoktanin into the right ear, continuing the peroxide in the left. Under this plan the discharge was soon found to diminish in the left ear but to increase in the right.

April 20th.—Peroxide to both, and continued from this date, with occasional instillation of sol. arg. nit., 5 gr. to the ounce.

May 2d.—No discharge from either ear, both drum-membranes are perforated, the stenosis is less than before, and there is some increase in hearing distance. The patient was under observation until July 20th, to which date the discharge had not returned in either ear.

It will be observed that in the first case reported, pyoktanin proved decidedly inefficacious. In the second, after a course of two weeks, favorable results were obtained. In about six weeks the discharge returned. One month of renewed treatment with pyoktanin failed; six weeks of other treatment was also ineffective, when again a short course of treatment with pyoktanin was followed by cessation of the discharge, which has not returned to the present day. It is probable that a carious condition of the bone at the fundus of the sinus was responsible for the long-continued want of success.

In the third case a favorable termination was obtained in about six weeks of treatment with pyoktanin and cleansing; the outlook was unfavorable at the beginning, but it was not a case of long standing.

In the fourth case a very fair trial was given to pyoktanin in a very chronic case, and no favorable result whatever was obtained.

The cases reported are fair examples, from those I have treated, for showing the best the drug can do, as well as what it cannot do. From my experience with it I should say that pyoktanin is probably worthy of some further trial, and that it would be well to see what effect could be obtained by stronger solutions, say, 1 to 500, or 1 to 250, also to try it in the form of a powder.

I am convinced that it is of much less value than the standard remedies now in use, but is worth thinking of when these fail. It has the disadvantage of highly coloring the skin or clothing, and is therefore an awkward remedy for home use.

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THE CLIMATE OF ARIZONA.

By WILLIAM W. HIBBARD, M.D.,

PHŒNIX, ARIZ.

Of late years increasing attention has been given by the profession generally to the study of climatology. American physicians are more frequently writing upon this subject, particularly as regards consumption, asthma, bronchitis, and kindred complaints. A large class of invalids in the Eastern and Southern States are having their thoughts directed to parts of the country where sunshine and dryness of air reach the maximum. It is generally admitted that there is no drier or sunnier portion of the United States than the southwestern section, and we think none the more so than Central and Southern Arizona. Whatever variance in opinion there may be as regards altitude acting beneficially in pulmonary complaints, dryness as a favorable climatic characteristic is generally admitted to be very desirable. To properly study climate, consideration should be taken both as regards health and disease. Though some patients undoubtedly do well in a high altitude, there are also those with heart disease, poor circulation, nervous irritation, etc., who do not improve. When studied in an unselfish and scientific manner every climate, like every individual, will be found possessing certain good and bad qualities, and it will be allowed there is at present no Garden of Eden without spot or blemish. That climate which removes one from those influences, either by the way of meteorological conditions or soil, and puts the patient where all the physical processes are improved in their action, allowing the greatest amount of out-of-door life with the least risk of injury, unquestionably will do the most toward arresting disease and promoting its cure.

Mountain climate is by some considered as not favorable where there is feeble circulation and nervous irritability, and it is particularly in such cases that a dry inland resort of the altitude of Phœnix (one thousand two hundred feet above level of the sea) and the Salt River Valley fills the completest requirement. Persons subject to heart affections, as well as kidney complaints, do well here, whether complicated or uncomplicated with pulmonary disease. The question continually confronting the physician is what climate, all in all, in the United States, more especially possesses to the fullest extent those conditions which will prove healthful and beneficial to the greatest number. Pure air and invigorating climate must be had to improve pulmonary affections. Central and Southern Arizona certainly possess most markedly and unqualifiedly such requirements. Here can be found an unsurpassed number of sunshiny days and dryness of atmosphere—the days comfortably warm, the nights cool and permitting refreshing sleep. No dews, no fogs, no rapid changes from heat to cold, no decaying vegetation, no rivers, pools, or lakes germinating poisonous miasms—evenness of temperature and pure water. It is not denied that the summers are hot—continuously so for three or four months—but though the thermometer may range from 105° to 110° F. the summer period is as healthy as any part of the year. During eight months of the year no more comfortable climate can be found. While writing this article (late in November) my office is thrown open as in a delightful June day—all the windows up, and a soft, balmy breeze is circulating throughout.

There are to-day many ready to rise up and call Arizona blessed, though she has hardly had an introduction to the public as a sanitarium, and up to date has been falsely and wrongly represented, not only as to climate, but otherwise, by those who were wrongly informed or viciously inclined. The time is coming, and near at hand, when the warm, dry atmosphere of Central and Southern Arizona will become a sovereign healing balm to untold numbers. Here out-of-door life can be had the year round. Here is absolute dryness of soil and atmosphere. Here sunshine is at its maximum. Here are all the necessary conditions for physical improvement. Here is a Territory (soon to become a State) with 114,000 square miles, with a range of latitude from 31° to 37°, admitting of many degrees of temperature northerly and southerly—the northern part of the territory in the mountains cool and comfortable during the heated term, and easily reached by a four hours' trip as soon as the Santa Fé Railroad makes connection with the Atlantic and Pacific Railroad, which will be during 1893. Arizona has magnificent resources — mineral, horticultural, agricultural, etc.—with bright promise of rapid railroad development. She has an intelligent, progressive, and wide awake people, and all her ways are ways of peace and prosperity. Thousands are in search of a health giving climate; no disease so mercilessly claims its victims as consumption. The rich and the poor, the high and the low, all alike are seeking a healthful climate. The study of climate is traceable as far back as Hippocrates. The writings of Galen suggest climatic changes in those afflicted with chest affections. Writers have always varied in their views upon this subject as to the salutary effects of different climates; one confidently asserting the superiority of mountain air and elevated regions; another recommending sea voyages; another, pine forests; and still another, medium altitude and dry atmosphere. Rightly judged no exclusive claim should be set up. Doubtless purity of atmosphere is the most important consideration in climatic cure, whether there be high or low altitude. Simple elevation is not all. There is no absolute immunity from phthisis in high altitudes. In the mountains of Switzerland (high up in the cloudy region) phthisis is found. The processes of decay are surely at their minimum in the dry air; there is a drying up of the secretions, a calcification of tubercles. In incipient consumption a high altitude may be highly beneficial. The majority of cases, however, brought to the notice of physicians are past the incipient stage, and in such cases is it not better to send patients to a more moderate elevation, where a pure, dry atmosphere, and an out-of-door life can be had throughout the entire year?

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TOTAL EXTIRPATION OF FIBROID UTERI.

AMONG the recent exotics which have sprung up amid the luxuriant vegetation of abdominal surgery, hysterectomy is one that, since its transplantation from German soil, has taken most kindly to American environment. To pass from metaphor to ordinary English, we may say that it bids fair to become *the* operation of surgical gynecologists. In consequence of the unquestionably remarkable statistics of American operators, there seems to be a growing tendency to view with suspicion benignant neoplasms of the uterus, which were formerly regarded as far less serious than they are at present. When we learn from the earlier editions of our text books on diseases of women, as well as from the statements of practitioners of wide experience, that the actual mortality from uterine fibroids is only about three or four per cent., and reflect that a considerable proportion of our colored population go through life suffering comparatively little inconvenience from the presence of such tumors, we are forced to accept one of two conclusions—either we have never understood the serious nature of the affection, or its importance from a surgical stand-point has been exaggerated. One who is less "mighty with the sword" than our successful abdominal surgeons may pertinently ask: "Have we reached such an advanced position that every fibroid tumor is to be treated only with the knife?" To which might be appended as a corollary the query: "Does invariable success in the application of this principle justify its general adoption?"

We have passed through many epidemics of laparotomy, and shall doubtless be exposed to many more. Their virulence has steadily decreased, but sporadic cases are always to be found. Doubtless the patient, conscientious labors of the electro-therapeutists have had much to do with the reaction against indiscriminate removal of the pelvic organs, though their cause has often been injured by the extravagant claims of ultra-enthusiasts. But of late it has seemed as if the honest efforts of competent observers to test the value of palliative treatment has been again overshadowed by the more rapid and brilliant "cures" obtained by laparotomists. Now, it is far from our intention to belittle the results of modern skill and perfect technique, but we do desire to emphasize the fact that the very successes of a few operators may in themselves exert a baleful influence upon the profession at large. Medical gynecology, of which the lamented Barker was an able and consistent exponent, has been crowded into the background by the triumphs of the operating-table. While the removal of large fibroid tumors, giving rise to really serious consequences, does, and always will be, considered as necessary and justifiable, conservative men regard with no small concern the growing tendency to subject to the same treatment small intra-pelvic growths, which were formerly looked upon as entirely unfit for such radical measures. Are moderate hemorrhage, pain, and pressure-symptoms sufficient indications for complete extirpation of the uterus—an operation, in spite of improved technique, to be regarded as one of the most formidable in surgery? Not a few eminent gynecologists have answered this question affirmatively, but we are safe in stating that the general profession has not yet been educated up to the point of accepting this idea without certain qualms of conscience. Now that the mere recovery of the patient is not regarded as the sole object of an operation, there is a disposition to criticise more rigidly indications and ultimate results. We do not know where this new craze will end. A rich and uncultivated field lies before our Southern *confrères*, who have not yet risen to a realizing sense of their possibilities. Hitherto the benighted African has been so indifferent with regard to her fibroids that she has continued to bear children and to perform her ordinary duties, from youth to old age, careless or oblivious of the fact that she might be the subject for a brilliant operation, and an early, though glorious, death, in the interests of science, instead of dragging out a long and obscure existence. When the supply of long-suffering Germans shall have been exhausted, we commend the hitherto shrinking African to the abdominal statistician, who may then number his triumphs by hundreds instead of by scores. It is true that the colored population, present and to come, may be somewhat diminished, but this may not be regarded as an unmitigated evil in localities where their value is rather numerical than actual.

PUBLIC LIBRARIES AND MEDICAL BOOKS.

WE have received from the Denver Public Library a list of the medical books on its shelves. The list is not a long one, including less than two hundred volumes, but it admirably represents the leading and most recent standard medical works in English. It contains also a few excellent German and French treatises. The selections very properly include numerous reference works, such as Wood's "Reference Handbook" and the "International Cyclopædia of Surgery."

Such a nucleus as Denver has thus obtained could only have been made after careful consultation with well-informed physicians, and its presence and availability must be of much service to the physicians of the city.

It would be well if other public libraries imitated that at Denver. The cost of getting one or two hundred standard medical works would not be large, and they would be of much value, both directly and indirectly, to a community. A good medical library in a town is an educational force, in a way and to an extent which few appreciate. There are not many physicians in the towns and smaller cities who have the means to buy, we will

say, the best two hundred medical books. Yet if such a series of works is accessible some of the wide-awake ones will use them, and then the sleepy ones will have to follow suit. It will then follow that the knowledge and skill of the whole medical community will be increased. We repeat, therefore, that the Denver Public Library model list of best medical books ought to be duplicated by all public libraries.

THE PROGRESS OF QUARANTINE LEGISLATION.

During the past week the Quarantine Bill, which had passed the Senate and in due course was reported to the House, has become involved in a tangle that threatens its defeat. There was already on the calendar of the House a bill "to provide for the better protection of commerce and for the general welfare by the establishment of a national quarantine." The committee which reported that bill now proposed to substitute for it another bill, which in terms was nearly the Senate bill, although it took the position of an original measure. To this bill a large number of amendments were proposed and adopted. The main contention was the old one of State rights, or encroachments of Federal upon State authorities.

An effort was made to provide a quarantine at the port of departure for immigrants, but it failed. The provisions for this quarantine were quite elaborate. The first clause was as follows: "No alien immigrant shall be permitted to land at any port in the United States who has not been quarantined at the port of departure for from five to seven days immediately preceding the day of embarkation. Such quarantine shall be strict and thorough, and apply to the person, clothing, and baggage of each under such rules, regulations, requirements, and conditions as said Secretary may deem proper, making use of the most approved appliances and methods to detect, develop, and eradicate all epidemic, contagious, and infectious diseases," etc. The support of this quarantine was placed upon the steamship companies. The ship's surgeon was also required to make daily inspection of all immigrants on the voyage. It is to be regretted that this amendment did not receive more favor. It certainly was a move in the right direction. If steamship companies can be compelled to have thoroughly clean ships, clean and healthy immigrants on their embarkation, and then keep their vessels clean, and their immigrant passengers clean, well-fed, and healthy during the voyage, the danger of the importation of cholera or any other infectious or contagious disease will be reduced to a minimum. In fact, if Congress will by any measure secure these conditions, all other quarantine legislation will be of comparatively little importance.

The most important amendment adopted was as follows: "Nothing in this act contained shall be construed to authorize any Federal officer to relax, modify, or suspend any rules, precautions, or regulations which may have been or which may hereafter be adopted by State or municipal authorities for the exclusion of contagious or infectious diseases from any port of the United States, or to permit the entry or discharge of any vessel in any port of the United States where quarantine regulations have been established by State or municipal authority until such vessel shall have complied with such regulations." This amendment was vigorously opposed by the friends of a national quarantine. It was maintained that if adopted the authority of the State would be paramount, and all efforts of the Federal Government to enforce any quarantine regulations would be prevented at ports where there were quarantines. The amendment was, however, adopted.

Thus modified the bill passed and went to the Senate, not as the Senate bill amended, but as a new House bill. In this form it must pass through the formality of being referred to a committee. What will be its fate is not now apparent, but it is doubtful if there will be any useful quarantine legislation at this session of Congress.

EXPERIMENTING WITH CHOLERA.

Pettenkofer, who, as is well known, has never fully accepted the doctrine of Koch with regard to the comma bacillus, has recently been experimenting with pure cultures of this lively microbe. His old-time views on the nature of the disease have not been materially affected by his most recent observations. Neither experiments on himself nor studies on the course of events, more particularly at Hamburg, have shaken his faith in the correctness of his often-repeated opinions. In a recent address, delivered at Munich, he has once more taken occasion to reassert his own pet dogmas with reference to the Asiatic scourge. A *résumé* of this entertaining lecture is published in the *British Medical Journal*. From it we learn that the veteran epidemiologist stated that "the only question now appeared to be how the comma bacillus was to be destroyed, or at any rate prevented from multiplying. He recalled that many years ago he said that the etiology of cholera was an equation with three unknown quantities, namely, x, a specific germ disseminated by human intercourse; y, a factor dependent on place and time, which he called 'local disposition;' and z, the individual predisposition.

"The simplicity of Koch's theory commended it to those who only looked at the individual patient, and not at the course of a long series of epidemics. Places as well as persons often enjoyed immunity, and places which suffered at one time remained free at another, even when two of the factors x, and z, were present. The determination of y was not so easy as that of the others, and the speaker could only say that the nature and degree of moisture of the soil had an important influence. The constant occurrence of the comma bacillus in the excreta of cholera patients indicated that the microbe had something to do with the process, but it was still open to question whether it alone was the cause of the disease."

In the course of his remarks Pettenkofer alluded to "some experiments made on himself with bacilli obtained from Hamburg. Several of his pupils offered themselves as subjects in his place, but acting on the principle *Fiat experimentum in corpore vili*, he thought he himself—seventy-four years old, glycosuric, without a tooth in his head, and with other infirmities of age—was the fittest person to run whatever risk there might be in the experiment. From pure agar cultures of the comma bacillus made by Professor Gaffky, a bouillon culture was prepared in the ordinary way by Drs. Pfeiffer and Eisenlohr. Gruber having shown that fresh cultures are more active

than those which have been kept for some days, Professor von Pettenkofer chose one which had not been quite twenty-four hours in the incubator. A plate culture of this showed that one cubic centimetre even of a thousandth dilution contained numberless comma bacilli, far more than could possibly be conveyed by a man's hand to his mouth. As Koch has shown that the gastric juice was capable of killing even a large number of comma bacilli, Professor von Pettenkofer was careful to take his dose of microbes two hours and a quarter after a light breakfast, when, according to a calculation made by von Voit, there could not have been so much as one hundred cubic centimetres of gastric juice, with 0.3 per cent. of hydrochloric acid, in his stomach. In order to neutralize even this small amount of acid, however, he took one gramme of bicarbonate of soda dissolved in one hundred cubic centimetres of Munich conduit water. He then measured out one cubic centimetre of the fresh culture, swallowed it at a draught, and washed out the glass with fifty cubic centimetres of water, which he also swallowed, so as to insure the ingestion of as many bacilli as possible. This was on October 7th. On October 9th severe colicky pains and moderate diarrhœa came on, and did not entirely cease till October 15th. During that time the urine was normal in amount and contained no albumin. He took no medicine whatever during the attack, but took his customary food with good appetite, and pursued his usual avocations without any interruption, feeling perfectly well except for the symptoms mentioned. While the diarrhœa lasted the stools were examined bacteriologically by Drs. Pfeiffer and Eisenlohr, who found them swarming with comma bacilli. Professor von Pettenkofer asks rhetorically how many *milliards* of these microbes there must have been in his intestines during these eight days, and yet he had no symptoms of Asiatic cholera. He thinks, however, that his experiment might have had a fatal result if it had been carried out in Hamburg, where not only x but y was present in full force. An exactly similar experiment was made on himself by Professor Emmerich on October 17th, with much the same result, except that the colic and diarrhœa were much more severe; otherwise he felt perfectly well."

So much for Pettenkofer's lecture, from which it appears that these German savants had the courage of their convictions. In answer to the possible objection that they had a mild attack of true cholera, they adduce the testimony of Ziemssen and others, who assert that they did not. Yet assertion is not proof. It certainly does not appear to us that the Koch doctrine has received its quietus from these experiments. It is generally agreed that the comma bacillus is not necessarily fatal when swallowed, but that does not militate against its causal relationship to the disease. There are cholera-proof individuals just as there are variola-proof ones.

On the other hand, it must be admitted that the bacterial origin of cholera does not fully explain all the features of its epidemic appearance. But the "soil and rainfall" views of Pettenkofer are not capable of scientific demonstration. They are mere theory and dogma. At all events, it is satisfactory to note that even Pettenkofer believes in local sanitation. If we can make ourselves and our homes "cholera-proof," we need not fear the Asiatic pestilence, even if we should inadvertently swallow an occasional comma-shaped vibrio. The senseless panic of last fall must not be supplied with this mental pabulum for a revival, even if we do get some cholera here next spring.

THE MEDICAL BILL FOR TEXAS.

Texas is following the lead of the other States, with a Bill for the Regulation of the Practice of Medicine, which will be presented at the present session of its Legislature. The provisions make it practically a registration law under a Board of Medical Control, consisting of the Governor, Attorney-General, State Health Officer, President of the Board of Regents of the State University, and Dean of the Faculty of the Medical School of the University. Said board shall be presided over by the Governor, or, in his absence, by the President of the Board of Regents. The Secretary of State shall act as its Secretary; its official acts shall be attested by him under the seal of State, and a majority of members shall compose a quorum. They shall meet as soon as practicable after the passage of this act, and thereafter, at least once in each year, or as often as they may be called together by the Governor, for the performance of the duties herein prescribed; the meetings to be held at the capital of the State. The members of said board shall receive as compensation for their services, while in attendance on, and going to and from, said meetings, the sum of $5 per day, and their actual travelling expenses.

It is made the duty of the board to publish in October of each year a complete list of the reputable schools of medicine in the United States and elsewhere, and furnish the same to the clerks of the different counties of Texas, who shall certify to the genuineness of the diploma and register the applicant as a licensed practitioner, with the privilege of transferring his residence to another county under the same rule.

The law is simple and uncomplicated, with the laudable aim of raising the standard of medical education by defining the reputable colleges to be those only whose regular course of instruction comprises at least three full terms or sessions of at least six months each, and which is otherwise recognized and accredited as reputable by the school of medicine to which it belongs.

This is a step in the right direction, and will be properly preparatory to a bill which will make State examinations obligatory and independent of the colleges. The latter is what Texas will, we trust, eventually do, to keep herself in line with her older sisters.

THE INTERNATIONAL MEDICAL CONGRESS.

The preliminary announcement of the committee of the Eleventh International Medical Congress has been received. The Congress will be opened in Rome on Sunday, September 24th, and will continue in session until October 1, 1893. His Majesty the King of Italy has signified his intention to be present at the inauguration ceremonies. A reduction of from thirty to fifty per cent. of the regular fares, for members and their ladies visiting Rome, has been promised by a number of the transatlantic lines and continental railroads, and it is hoped to secure equally favorable concessions from the other steamship and railway companies. The Italian railways

will also arrange for special tours of the peninsula at reduced rates, thus giving those assisting at the Congress an opportunity to visit the principal cities and universities of Italy.

The regulations of the Congress are in most particulars the same as those of previous meetings. The entrance fee is twenty-five francs, or five dollars, and its payment entitles the member to a copy of the "Proceedings of the Congress," and presumably also to tickets of admission to the various functions and entertainments which will take place. Non-medical men, including pharmacists, who have taken a degree in other sciences, and whose special studies touch on any of the subjects connected with medicine, will be permitted to become members of the Congress, and present communications or take part in the discussions. The work of the Congress will be divided among eighteen sections, in addition to the general sessions, the first of which will be held on September 25th. As supplementary to the regular meetings, the dates of which will be announced later, one or more extraordinary sessions will be held if found necessary to complete the work of the Congress. Those intending to read papers in any of the sections must send the titles, together with an abstract of each communication, to the Secretary-General of the Eleventh International Congress of Medicine, Genoa, Italy. The announcement of the title must be sent so as to be received not later than June 30th, and the syllabus of the paper to be read must follow within one month of that date. Intending contributors who fail to comply with these requirements will be permitted to read their papers only in case time permits after the appointed work of the section is concluded.

The Committee announce that they have already received notice of the adherence of many representatives from various countries, and it is confidently anticipated that the meeting will be a very successful one.

There is one provision of the Committee, however, which we cannot but regard as very unwise. It is, namely, the admission of Italian as one of the official languages in addition to French, German, and English. The one thing that now interferes with the easy working of International Congresses is the fact that a member, in order to be able to follow the proceedings with interest and profit, must be able to understand, if not to speak, three languages. The three leading languages of the civilized world are unquestionably, English, French, and German, and a knowledge of them has become almost indispensable to the student of science. The literature of Italy, Spain, and Russia, to say nothing of the smaller nations of Northern Europe, contains undoubtedly much of very great value, not only in medicine but also in the other sciences, and it would be useful to know them all. But *linguæ multæ, vita brevis*, and no one should be compelled in these busy days to acquire familiarity with more than three tongues in addition to his own, should that happen not to be one of the three mentioned. The addition therefore of Italian is, we think, a mistake, throwing an additional burden on the members of the Congress, and tending to diminish in so far their interest in the proceedings. And it is all the more unnecessary since a knowledge of French, at least, is possessed by almost every educated Italian. We hope that it is not even yet too late to amend this regulation, or that the Italian members will, out of consideration for the linguistic poverty of their foreign colleagues, present their communications in one of the three more universally comprehended tongues.

A STATE BOARD OF MEDICAL EXAMINERS FOR PENNSYLVANIA.

It is little less than disgraceful that a great and enlightened commonwealth like Pennsylvania should still be without any defence against uneducated and unqualified practitioners. Twenty-three States, one Territory, and the Cherokee and Choctaw Nations have protected themselves by the establishment of State Boards of Examiners, but every effort to accomplish this result in Pennsylvania has so far been defeated. The State Medical Society is now trying again, and most vigorously, to secure the needed reform. The Legislative Committee has issued a pamphlet giving many interesting and useful facts in support of their proposed law.

In 1891 we are told that there were in existence, in the United States, twelve colleges or institutions known to be fraudulent—simply diploma mills. One each of these is in New Hampshire, New Jersey, and Washington, two in New York, three in Vermont, and four in Ohio; and there is another in Ohio that may as well be classed as fraudulent.

The following judicial decisions are quoted:

"There is no good reason why restraints should not be placed upon the practice of medicine as well as the law."—Decision of the Supreme Court of Michigan, People v. Phippin, in 1888.

"The power of the Legislature to regulate the practice of medicine, dentistry, or surgery, is undoubted."—Decision of Supreme Court of Kansas, 44 Kan. 565.

"No one has a right to practise medicine without having the necessary qualifications of learning and skill; and the statute only requires that whoever assumes, by offering to the community his services as a physician, that he possesses such learning and skill, shall present evidence of it by a certificate or license from a body designated by the State as competent to judge of his qualifications."—Decision of U. S. Supreme Court, Justice Field, 129 U. S. 114.

To all this it may be added, that in those States in which the legal regulation of medical practice has been adopted, good results have followed. The people have been insured to some extent against quackery, and no one's just rights have been encroached upon. The laws have been for the benefit of the people. Among the eight thousand physicians of Pennsylvania, nearly one thousand are without diplomas.

"**A Doctor's Pilgrimage**" is the title of an attractive brochure giving an account of the trip of a number of physicians from New York, Washington, and Chicago to the new health-resort in Cumberland Gap. It is cleverly written, as well as illustrated by its author, Dr. Allan McLane Hamilton.

Road Improvement.—It is proposed, in an approaching convention in North Carolina, to discuss the best means of improving the highways in that State.

News of the Week.

Medical Society of the State of New York. — The eighty-seventh annual meeting will be held in the City Hall, Albany, on Tuesday, Wednesday, and Thursday, February 7th, 8th, and 9th, commencing at 9.15 A.M. on Tuesday and ending at 1 P.M. on Thursday. The following papers are to be read: "The Relation, in the Male and Female, of Genital Disease to Mental and Nervous Affections," by Dr. Landon Carter Gray, of New York; "The Epileptic Interval; Its Phenomena and their Importance as a Guide to Treatment," by Dr. William Browning, of Brooklyn; "Reflex Disturbances in the Causation of Epilepsy," by Dr. William C. Krauss, of Buffalo; "Mental Epilepsy," by Dr. J. Montgomery Mosher, of St. Lawrence State Hospital for the Insane, Ogdensburg; 'The Development of Epilepsy after Traumatic Injury to the Skull," by Dr. B. Sachs, of New York; "The Treatment of Uræmic Convulsions," by Dr. R. C. M. Page, of New York; "The Registration of Midwives," by Dr. J. L. Kortright, of Brooklyn; "General Review of the Operations to be Discussed," by Dr. Egbert H. Grandin, of New York; "The Limitations of Embryotomy," by Dr. N. Clifton Edgar, of New York; "The Limitations of the Cæsarean Section," by Dr. Robert A. Murray, of New York; "The Anatomical Limitations of Symphysiotomy," by Dr. J. E. Kelly, of New York; "The Clinical Limitations of Symphysiotomy," by Dr. Charles Jewett, of Brooklyn; "Practical Antisepsis and Asepsis," by Dr. Howard A. Kelly, of Baltimore; "Epitaphs from the Tombstones of Medical History," by Dr. Joseph H. Hunt, of Brooklyn; "The Management of Suppuration Complicating Tuberculous Disease of the Bones and Joints," by Drs. V. P. Gibney, of New York; Roswell Park, of Buffalo; Henry Ling Taylor, of New York; and Louis A. Weigel, of Rochester; "The Pathology of Carcinoma," by Dr. H. C. Coe, of New York; "The Etiology of Carcinoma," by Dr. Roswell Park, of Buffalo; "The Value of Internal Medication in the Treatment of Carcinoma," by Dr. Jarvis S. Wight, of Brooklyn; "The Results Obtainable from the Use of Aniline Products in Carcinoma," by Dr. Willy Meyer, of New York; "Caustics in the Treatment of Carcinoma," by Dr. Daniel Lewis, of New York; "The Knife in the Treatment of Carcinoma," by Dr. N. Jacobson, of Syracuse; "Tuberculous Epididymitis," by Dr. Herman Mynter, of Buffalo; "The Practical Value of the Newer Methods of Examination in the Diseases of the Stomach, with a Consideration of the Indications Given for Diet and Treatment by such Examinations," by Dr. Henry L. Elsner, of Syracuse; "The Methods of Obtaining and Examining the Stomach Contents in Disease for Purposes of Diagnosis," by Dr. J. Fuhs, of Brooklyn; "The Disturbances of the Motor Function of the Stomach; their Diagnosis, Symptoms, and Treatment," by Dr. C. G. Stockton, of Buffalo; "The Physiological Effects of Electricity in the Stomach, the Indications for its Administration and Use in Gastric Disease, and the Methods of Using the Same," by Dr. Max Einhorn, of New York; "Report of a Case of Severe Abdominal Injury Terminating in Recovery," by Dr. J. S. Cooley, of Glen Cove; "The Treatment of Inguinal Hernia," by Dr. Alex. Dallas, of New York; "Certain Types of Septicæmia Resulting from Abortion," by Dr. Andrew F. Currier, of New York; "Puerperal Sepsis; its Prevention and Cure," by Dr. William W. Potter, of Buffalo; "Hoarseness," by Dr. W. Franklin Chappell, of New York; "The Diagnosis and Nomenclature of Fevers," by Dr. Nelson G. Richmond, of Fredonia; "Congenital Opacities of the Lens," by Dr. William F. Mittendorf, of New York; "Is Stoerk's Blennorrhœa and Laryngitis Sicca One and the Same Disease?" by Dr. W. Freudenthal, of New York.

The Committee on Credentials will meet at the Delavan House Monday evening, when members and delegates can register. Communications regarding papers should be addressed to the Business Committee, Dr. Seneca D. Powell, 12 W. Fortieth Street, New York; Dr. William Maddren, 1 Hanson Place, Brooklyn; Dr. John O. Roe, 28 West Chester Street, Rochester.

Officers.—President, Lewis S. Pilcher, Brooklyn; *Vice-President*, Henry L. Elsner, Syracuse; *Secretary*, F. C. Curtis, Albany; *Treasurer*, C. H. Porter, Albany.

The Cincinnati College of Medicine and Surgery.— Dr. J. Trush has resigned the chair of Theory and Practice of Medicine in consequence of ill health, and the vacancy thus created has been filled by the transfer of Dr. E. W. Mitchell from the chair of Materia Medica and Therapeutics. Dr. G. A. Fackler, Professor of Materia Medica and Therapeutics at the Women's Medical College of Cincinnati, has accepted the appointment to the vacancy created by the transfer of Dr. Mitchell.

Medical Editors' Association.—The annual dinner of the Association of Medical Editors will take place in Milwaukee, on the evening of Monday, June 5, 1893. The annual meeting of the American Medical Association will be held in the same city on June 6th, 7th, 8th, and 9th.

New Jersey Board of Medical Examiners.—Candidates applying for a license (after the July, 1893, meeting of the State Board of Medical Examiners) to practise Medicine in New Jersey, will be examined in the following subjects, arranged in sections, as follows, viz.: Section 1, Materia Medica and Therapeutics; Section 2, Obstetrics and Gynecology; Section 3, Practice of Medicine (including Diseases of the Skin, Nose, and Throat); Section 4, Surgery (including Surgical Anatomy, and Diseases of the Eye, Ear, and Genito-urinary Organs); Section 5, Anatomy; Section 6, Physiology; Section 7, Chemistry; Section 8, Histology, Pathology, and Bacteriology; Section 9, Hygiene and Medical Jurisprudence. The following percentages will be required, also, after that date, before a license will be issued, viz.: Candidates examined in the first class, *i.e.*, graduates of five years or more, shall obtain a total average of eighty per cent.; candidates examined in the second class, *i.e.*, graduates of less than five years, shall obtain a total average of seventy-five per cent., providing that in no one section shall the percentage be less than thirty-three and one-third per cent., in which case, however, should the total percentage in all the other sections be above seventy-five per cent., the candidates may be granted a second examination, immediately, upon that section. Candidates examined in the third class, *i.e.*, non-graduates, who have taken three full courses of lectures in a reputable medical school, shall obtain a total average of

eighty per cent.; and candidates taking their preliminary or final examination, shall obtain a total average of eighty per cent. at each of said examinations. Information concerning these examinations may be obtained from the Secretary of the Board, Dr. William Perry Watson, Jersey City.

The Study of the Scientific Aspect of things produces some curious results. Dr. Lauder Brunton, in a series of articles on the "Correlation of Structure, Action, and Thought," reproduces some pictures illustrating the "Fall of Man," in which "the position of Eve's left arm illustrates the action of the fifth cervical nerve," while "the action of the hallux is well shown in Eve's right and Adam's left foot." It is interesting to know that the fifth cervical nerve was so prominently concerned in the fall of man.

A Medical Centenarian.—Dr. Severin Wielobycki, formerly a Polish refugee and subsequently a naturalized British subject, who has been a resident of St. John's Wood, London, for some twenty-seven years since his retirement from practice, completed one hundred years of life on January 8th.

Dulcine.—Under this name a new substance has been described which, on account of its sweet taste and its complete freedom from toxic properties, appears likely to attract attention. It is obtained by means of paraphenetol carbamide, a compound prepared in 1883 by Berlinerblau, at which time the manufacture was hampered by its great cost. A new process has, however, been discovered which will in all probability reduce the price sufficiently to allow of general use.

The Pianoforte as a Focus of Infection.—The sources of infection in this civilized age are as numerous as they are varied, and meet us at every turn. The *Musical Times*, in one of its recent issues calls attention to one of these sources of trouble, and one which is very apt to be overlooked. A well-to-do household is extremely likely to include among its members a devotee of one of the "tuneful nine." The probable presence of musical instruments in such a family cannot be regarded as a very violent assumption, and in the list of such distributors of harmony the pianoforte will very likely take a prominent place. Yet the result of the fondness for sweet sounds may perchance be the introduction into the home of an element of discord much more displeasing than that which strikes the sensitive ear, since it may affect the harmonious working of the whole economy. How this disaster may arise is set forth with more or less cogency by our contemporary aforesaid. He puts the matter in this way. A garment exposed to infection can, he says, "be quickly disinfected, but it is far more difficult to fumigate all the multitudinous cloths, baizes, felts, and woollen materials which the complex mechanism of a piano contains. It is questionable, indeed, whether this is ever properly done. Few pianos are regularly cleaned out. Dust accumulates in them, and they become a receptacle for all kinds of dangerous germs. Among musicians it is well known that one of the chief centres in Germany of cheap piano-making is Hamburg; and—especially in the slum of St. Pauli, where the cholera has been rife—thousands of pianos are in course of construction, the majority of which are destined for the English market."—*Lancet.*

Doctor of Medical Sciences is a new medical degree proposed for establishment in France by the French Minister of Public Instruction. This title will be superior to the ordinary M.D.

The Library of the American Medical Association will, it is said, be incorporated with the Newberry Library of Chicago.

Mortality of New York City in 1892.—During the year 1892 there were reported 44,317 deaths, against 33,650 in 1891. Owing to the increase in the population, however, the annual death-rate was 24.25 per thousand inhabitants, while in 1891 it was 24.73. During the year the deaths from phthisis were 5,005, and from accidents, 1,571. There were 320 deaths from sun-stroke, while in 1891 there were but 95. The number of reported cases of some of the more prominent contagious and infectious diseases was as follows: Scarlet fever, 6,947; diphtheria, 4,636; measles, 12,694; typhoid fever, 1,129; typhus fever, 206; small-pox, 367; cholera, 10. During the year the officials of the Board of Health vaccinated 142,050 persons, and seized and destroyed 5,128,614 pounds of food unfit for use. There were reported 49,437 births, as against 46,904 in 1891.

Typhoid Fever in Chicago.—The number of deaths from typhoid fever in Chicago during the past year was 1,479, a little better showing than in 1891, when the number was 1,987. In New York, which is about fifty per cent. larger, the number was 400. The four-mile tunnel into Lake Michigan has recently been completed; but the canals which are to drain the Chicago River away from the lake are not yet finished, so that a large amount of sewage is still poured into the lake.

A Medical University for Chicago.—It is stated that both the Rush Medical College and the College of Physicians and Surgeons, of Chicago, have offered to give up their entire property to the Chicago University, and the faculties to resign unconditionally, in order that a medical department may be organized on a level with other schools in this already wonderfully well organized institution. It is stated that $1,000,000 is in sight for the endowment of such a medical department.

The Intra-peritoneal Insufflation of Air in Tuberculous Peritonitis.—The astonishing curative effect of simple laparotomy is well-known from the publications of Professor Cheyne, as also from those of Continental surgeons, and various hypotheses have been advanced to explain it. Now Professor Mosetig-Moorhof, in a recent communication, is inclined to believe that the curative influence of laparotomy in tuberculous peritonitis is due, as was originally suggested by Caspersohn, to the irritation caused by the entrance of air into the peritoneal cavity. His attention was called to this fact in a case of tuberculous growths of the peritoneum in a woman aged forty-two, on whom laparotomy had been performed merely for the purpose of diagnosis, and in whom three weeks after the incision of the abdominal wall the growth was reduced from the size of a child's head to that of an apple without any further interference. In May, 1892, Professor Mosetig had the opportunity of trying a new method of treatment based on this experience. In a boy four years of age, with ascites, hydrocele of the cord and tuberculous induration of the epididymis and of the vas

efferens, the tuberculous testicle was removed, and by introducing a drainage-tube through the tunica vaginalis and the inguinal canal the ascites was drained off, 1,700 c.c. of liquid containing albumin being discharged. Then air, sterilized by passing it through a solution of warm carbolic acid and again through layers of cotton-wool which dried it, was insufflated into the peritoneal cavity through the drainage-tube. The ascites disappeared, the boy quickly recovered, and in October the abdomen was, on percussion, found to be normal when the patient was again seen by the surgeon. From these facts Professor Mosetig was induced to recommend paracentesis abdominis with subsequent insufflation of air in cases of tuberculous peritonitis associated with ascites, in place of the laparotomy heretofore performed in such cases.

The Bacteriological Investigation of Supposed Cholera Cases.—The directors of the Carnegie Laboratory of the Bellevue Hospital Medical College, Dr. A. Alexander Smith and Dr. Frederic S. Dennis, have issued the following announcement: "In view of the possible advent of cholera to this country during the coming summer, and the great importance of biological examinations in the diagnosis of this disease, the directors of the Carnegie Laboratory announce that they have arranged for short courses on this subject, to be open to representatives of health boards, health officers, and properly accredited medical men. It is designed that these courses shall have the same general scope and fulfil the same purpose as the cholera courses given at the Hygienic Institute in Berlin, by Professor Robert Koch, in 1886 and 1887. They will be under the direction of Dr. Edward K. Dunham, who has worked considerably on cholera in Germany, and recently in this country."

Retirement of Professor Péan.—M. Péan has resigned his chair, having reached the limit of age fixed for the tenure of professorships in the Paris Medical Faculty. On December 24th, he delivered a farewell address to a crowded audience in the surgical theatre of the St. Louis Hospital. He traced the history of his professional career, laying special stress on the influence of Nélaton's teaching on him. The secret of his success was, he said, hard work, and he concluded by urging on his hearers to take as their motto that which had been his own rule of life, *Travaillez.*

The International Medical Congress.—To the European states which have promised special travelling facilities by land or water for intending participants in the above Congress, must now be added Switzerland and Turkey. There are already constituted in Italy, for the purposes of this great gathering, ninety local committees, while the foreign ones now amount to twenty. In the eight months that have still to elapse before the opening of the Congress the Italian committees will number seventy-three more; and the foreign, twenty-five more. The efforts of the Organizing Committee are now being concentrated on the programme, so as to meet the objects of the meeting with the least possible friction to the participants, and the greatest economy of time and attention.

A Paper Hospital.—A description of a portable paper hospital is given by the editor of the *Popular Science Monthly* in connection with an article by M. Emmanuel Ratoin. Its entire dimensions are sixteen by five metres, and it will accommodate twenty beds. Folded up, it forms a load for three two-horse trucks. When it is set up the three trucks, the length of which is equal to the width of the building, are brought up so as to be parallel in line and a few metres distant from one another, and are arranged so that their floors, which are to form a part of the floor of the building, shall be on a level. Light T-shaped joists of iron are stretched across the intervals, supported by trestles when necessary, to receive the paper panels completing the floor. The element of the construction is a panel, usually three metres by one metre and sixty centimetres, and a tubular beam ten centimetres in thickness, and composed of two walls of pressed paper four millimetres in thickness, fixed upon a frame likewise of paper. The pieces composing this frame are V- or U-shaped. The panels are easily handled, and they fit at their edges so as to constitute a wall. The roof is composed of similar panels fastened in pairs. The two parallel walls are connected by a number of tie-beams composed of thin wire of galvanized iron. The floor is also composed of paper panels about a metre and a half square. By means of double walls inclosing a cushion of air, such a building will well resist variations of temperature outside. The interior of the building is without visible framework and without posts. The building is closely jointed and might be varnished, making it easy to wash and disinfect. The windows are of wire gauze covered with a transparent coating. Ventilation is obtained through holes bored at the angle between the ceiling and the walls.—*Boston Medical and Surgical Journal.*

Dr. Roberts Bartholow.—It is a great pleasure to announce that Dr. Bartholow has been completely restored to health, and has resumed his practice.

The Prize for an Essay on Homœopathy, offered by Dr. George M. Gould, has been awarded to Dr. William W. Browning, of Brooklyn.

Pommery and the Rabbits.—Some years ago Madame Pommery, whose name is so familiar to epicures, began to utilize some waste land over her champagne cellars, for the breeding of rabbits destined to serve as food for the powder expended by her guests during the shooting season. Madame Pommery was evidently unacquainted with the rabbit scourge that has proved so detrimental to agricultural operations in Australia, or she would never have made such a hazardous experiment. Finding that the rodents above ground were fast becoming more numerous than the bottles in the cellars beneath, and that their burrowing threatened the stability of the said cellars, she consulted M. Pasteur. That magician, by sowing chicken-cholera broadcast among the obnoxious animals, succeeded in killing them all in a fortnight.

The Jury's Little Joke.—A death from chloroform occurred not long ago in the case of a man crushed in a railway accident, whose arm it became necessary to amputate at Jervis Street Hospital, Dublin. The coroner's jury acquitted the hospital authorities of any responsibility for the unhappy event, and added that, in its opinion, the railway company was also innocent of the chloroform death.

Society Reports.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, January 6, 1893.

CHARLES L. DANA, M.D., PRESIDENT, IN THE CHAIR.

Treacherous Chloroform.—DR. GEORGE F. SHRADY had always been of the impression that chloroform was safer in young people, relatively, than in old, which would account for his using it in the case which he was about to relate. The patient was a boy, nine years of age, whom he saw in consultation with Drs. Carleton and Hannon, and who was to undergo an exploratory operation for a wound of the head sustained in falling down stairs. He passed very easily under chloroform anæsthesia, when suddenly he ceased breathing, the eyes became glassy, and the death-pallor suddenly spread over his face. Two or three of the by-standers said the boy was dead, and Dr. Shrady was ready to express the same opinion, but concluded to institute artificial respiration, which he did immediately, and continued it twenty minutes before obtaining any sign of life. Respiration had entirely ceased, the radial pulse could not be felt, and the only evidence of life had been a few convulsive heart beats. Suspension by the feet was tried as well as the inhalation of nitrite of amyl. The case appeared as a desperate one, and he was tempted repeatedly to abandon his efforts, but was finally rewarded by the return of consciousness. This was the first unpleasant experience he had with chloroform, although he has been constantly on the lookout for it. It demonstrated in a striking manner the rapidity and force of its action at a time when danger was, perhaps, least expected. The gentleman who administered the anæsthetic took every precaution to guard against accident; the chloroform was of guaranteed purity, and the patient's heart was sound.

DR. PEABODY remarked that the case was a practical confirmation of the statement of the Hyderabad Commission, that if one watched the respiration and kept it active during chloroform anæsthesia there would be no danger on the part of the heart.

Replying to interrogatories, DR. SHRADY said the boy had taken chloroform but a few minutes; the stage of excitement had only just passed, no operative steps had been taken, and consequently there was no shock. There was marked cyanosis.

DR. BULL inquired whether Dr. Shrady had not seen the same thing happen during ether anæsthesia, and wished to know why he had been so much more impressed with the accident from chloroform.

DR. SHRADY replied that he had seen trouble from ether, but it had not been so sudden nor profound. He had always regarded chloroform as more dangerous than ether, hence the strong impression which the accident had made upon him.

DR. BULL remarked that such was the generally accepted opinion.

Extensive Thrombi without Œdema.—DR. J. WEST ROOSEVELT read the hospital notes of a case as follows: The patient was admitted November 30, 1892. She was twenty-four years of age, born in Ireland, housewife, single; negative family history; no previous severe illness. A month ago she had a child. A week later she began to have a swelling just in front of the ear, causing her great pain. No chills. The mass increased in size, and just before her admission it broke and discharged a large amount of pus. It was packed and dressed. After the birth of her child her right leg was very much swollen, continuing so for three weeks.

December 14th.—The temperature still remains high. The patient had a chill yesterday morning, and another severe one at noon. She feels well, rests well, takes her food, and complains of no pain. Over the right apex, behind, the breathing is slightly exaggerated, and there are crepitant and subcrepitant râles. The patient has a slight cough. Vaginal examination is negative. The temperature, from the time of admission until about December 9th, remained below 102° F., and then rose to 104.8° F., and remained high, except when brought down temporarily, until death, reaching 106° F. on the 18th of December. On the 10th, after the temperature had risen, physical examination was negative, the abscess was dressed and was found to be discharging but very little. The patient complained of no pain, and appeared to be well in every way except for the temperature.

December 20th.—The patient continues to have a high temperature, and appears to be sicker, pulse more rapid and not so full. She does not complain of any definite symptoms. The abscess cavity has almost healed. The urine had been of about normal specific gravity, contained a trace of albumin, and a few hyaline and granular casts. On the 18th it was found to contain twenty per cent. of albumin. Attention was called to the fact that there had been no œdema at any time during her stay in the hospital. She grew gradually weaker, and died on December 22d.

The autopsy revealed thrombosis of the uterine veins, whence it could be traced to the vena cava, where it occluded the entire lumen of the vessel. Both renal veins were more than three fourths filled by clot. The right leg, which originally had been the seat of milk-leg, was not œdematous, yet the femoral vein contained a large thrombus. The thrombus in the cava and renal veins was puriform in the middle, and there ended abruptly. It could not, in the light of the history, have existed before death, for there had been fair heart-action, the extremities were not cold, there was no apparent obstruction in them; yet the femoral vein at autopsy was found apparently completely obstructed, as was also the vena cava. It had been suggested by a pathologist of much experience, that during life there had probably been a long whip-like thrombus in the centre of the vessels, the remainder of the thrombus forming post mortem.

DR. BEVERLEY ROBINSON inquired whether there was a thrombus in the heart, and received a reply in the negative. He had never seen so extensive a thrombus. He thought it was in all probability due to some condition of the blood, and not of the veins themselves. He asked if there was any explanation for the thrombi selecting these localities.

DR. ROOSEVELT said there was none except, in the case of the renal veins and cava, connection with the uterine veins. He asked whether any of the members had known of a case of thrombus evidently lasting considerable time, even undergoing puriform change in the centre, the femoral veins also being involved, without there being œdema? Further, what became of the thrombi?

DR. FRANCIS P. KINNICUTT said the only explanation which he could offer for absence of œdema of the limb was that the femoral thrombus could not have been complete.

DR. WILLIAM T. BULL said he had always supposed, and had taught, that the thrombus in the vein underwent resolution and thus disappeared, the vein becoming pervious again, provided the change in the clot had not gone far enough to become connective tissue.

DR. WILLIAM M. POLK said he had seen somewhat similar cases of thrombosis, but could not recall one in which there was so little disturbance of the circulation below the obstructing point. So far as the phenomena of milk-leg were concerned, they were supposed to be due to an implication of the lymphatics, although there might be associated thrombosis of the veins. The œdema, however, was believed to be the result of implication of the lymphatics, rather than of the condition of the vein.

DR. PEABODY inquired whether there had been any infarctions elsewhere in Dr. Roosevelt's case.

DR. BIGGS, who had examined the specimens, being requested to answer the question, said that in one kidney there were two white infarctions, not recent, and a large number of minute points of suppuration.

Dr. Peabody thought the centre of the thrombus might become puriform within a few days. Dr. Kinnicutt's explanation of the absence of œdema must have been the correct one, viz, absence of complete obstruction of the femoral vein.

In typhoid fever and other conditions accompanied by thrombosis of the femoral vein, œdema occurred as soon as one felt a cord like state of the vein. Since it had been stated that the obstruction of the femoral vein was complete in Dr. Roosevelt's case, he could offer no explanation for the absence of œdema.

With regard to what became of the thrombus, he was inclined to accept the view expressed by Dr. Bull, that it underwent resolution or disintegration. All knew what enormous masses of exudate material—a pound or more—were sometimes taken up and disposed of by the lymphatics, whether in the lungs during croupous pneumonia or in other conditions.

Dr. Biggs said that in the case related by Dr. Roosevelt he had some inoculations made with substance from the uterus, spleen, and from the thrombus in the vena cava, and in all the same result was obtained, showing the presence of staphylococcus pyogenes aureus and albus, nothing else. He made sections of the uterus and of the various thrombi. It seemed to him that the thrombus of the right femoral vein had begun organizing from the periphery. It had a semi-translucent appearance, which one never sees ordinarily in a thrombus, and which is characteristic of newly formed connective tissue. The thrombus in the upper part of the vena cava, which extended from the diaphragm down to below the origin of the renal veins, was puriform throughout its entire centre. The uterus presented a very striking condition. It seemed in a state of necrosis. The walls were very friable, so that a blunt instrument could easily be passed through them.

He inquired whether any present could offer an explanation for the way in which the blood made its return to the heart. There was essentially a thrombosis of all the large veins from the diaphragm down to the femoral, and extending down the right femoral some distance.

Dr. Kinnicutt thought there could be but one explanation, namely, that the thrombosis could not have completely occluded the vessels.

Dr. Peabody suggested a possible explanation by anastomosis between the epigastric and mammary veins, but Dr. Roosevelt said there was no enlargement of these veins, whereupon Dr. Peabody said there could not have been complete thrombosis.

Dr. Biggs said the question of complete thrombosis was one of fact and capable of positive proof. The vein was full; the external part of the thrombus was a firm clot; the anterior was puriform, and could not have occurred at or following death.

Dr Peabody wished to know whether Dr. Roosevelt and Dr. Biggs would be put on record as stating that the blood did not return to the heart, and yet the patient lived.

Dr. Roosevelt replied that he had already expressed the supposition that the thrombosis could not have been complete; that the appearance must have been deceiving, and that there was only a whip-like clot in the interior.

Dr. Biggs said he felt absolutely certain that it was not a post mortem thrombus; that it was certainly antemortem, forming at least forty-eight hours before death. He said in this connection that he had at present a case in which, if the thrombus had not extended into the vena cava, it certainly had extended very nearly to it. The thrombus had commenced in the left femoral, and latterly had extended also to the right femoral vein. The patient had typhoid fever, and was doing very well for a time, although the thrombi had caused œdema of both lower extremities. Suddenly a chill occurred, the temperature rose above 105° F., severe pain developed in the abdomen, there was tympanites, and great tenderness. All the superficial veins of the abdomen became suddenly and very rapidly enlarged. After two or three days the temperature fell, but the superficial veins remained dilated, constituting a well-defined net-work. It seemed to him the thrombus had extended into the vena cava, and that the patient had been saved by collateral circulation through the superficial veins.

Dr. Roosevelt suggested that Dr. Biggs's case, in which the superficial veins became enlarged, indicating collateral circulation, went to prove that in his own case, in which there was no such dilatation of the superficial veins, the thrombic obstruction could not have been complete.

Is Massage Permissible in Phlegmasia Alba Dolens?—Dr. Beverley Robinson raised the question as one of practical interest, to what extent a leg might be moved which was the seat of white swelling, phlegmasia alba dolens, or phlebitis. He never felt decided as to how much he would be justified in rubbing such a limb in order to encourage the thrombus to resolve. He always felt that the patient ran some risk to life by interference, and yet one was expected to do something. He also feared to put on a tight bandage, lest a clot might be detached and pass to the right heart. He asked the opinion of the members, whether it was not dangerous to interfere in a case of thrombosis of a large vein of the lower extremity by rubbing or applying a bandage?

Dr. Kinnicutt thought this question came at times to everyone. His own feeling had been much like Dr. Robinson's, viz., that the less one did by mechanical interference the better. His custom had been to apply hot fomentations, if grateful to the patient, as it usually was, and to keep him as quiet as possible. Cold applications were used if the patient preferred. He did not advise bandaging during the period of a possible disintegration of the thrombus.

Dr. Polk agreed with Dr. Kinnicutt. Cases of phlegmasia alba dolens were invariably septic, and gynecologists did not hesitate to treat the interior of the uterus in order to diminish infection.

Dr. Bull inquired whether thrombosis of the femoral vein was not common in typhoid fever?

Dr. Roosevelt and Dr. Kinnicutt thought it was sufficiently common not to excite surprise, and Dr. Kinnicutt said it seemed to depend on the condition in which the patient was left rather than upon a virulent type of fever. Being also asked whether it usually terminated favorably, he said that it was not considered a particularly unfavorable complication, and that personally he had not seen a death from it. The disturbance of locomotion seemed not so persistent as in puerperal cases.

Dr. Polk remarked that, according to his experience, in puerperal cases there was apt to be some trouble from œdema on going about long after the patient recovered. He thought the cases were severer than in typhoid fever, that the infection was of a severer type, and that the condition of the lymphatics was largely responsible for the œdema. He had had one case a month or two before labor. This patient also had a second confinement which was followed by phlegmasia dolens of the other leg, so that now she had to wear an elastic stocking on both lower extremities; so it would seem that the effect had been about equally severe in both attacks, the ante- and the post-partum.

Dr. Biggs said, regarding the question whether recovery always followed thrombosis of the femoral vein, that not long since he made an autopsy on a patient who had an obscure febrile disturbance following severe muscular exercise, with later thrombosis of the right femoral vein, and sudden death about the sixth week. He found an old thrombus, at least five or six weeks old, entirely occluding the femoral vein, while a comparatively recent thrombus was found in the external and common iliac, extending into the vena cava but not completely occluding it. This mass had been separated about the junction of the femoral with the external iliac, and carried up to the right side of the heart, a part of it through to the

pulmonary artery, completely occluding it. Death had been instantaneous. Within the past week he had seen another case of embolism of the pulmonary artery, occurring ten days after removal of the uterus and its appendages, death being sudden.

Dr. Kinnicutt remarked that he had never seen extensive thrombus without being anxious as to what would become of it. In stating that he had not seen it cause death in typhoid fever, it must be remembered that individual experience must be limited in a matter of that kind.

THE NEW YORK ACADEMY OF MEDICINE.

SECTION ON PUBLIC HEALTH, LEGAL MEDICINE, AND MEDICAL AND VITAL STATISTICS.

Wednesday Evening, November 23, 1892.

The Result of Examinations of Sewer-gas which Escaped in Tenement and Private Houses wherein Diphtheria Occurred.—Dr. L. Fischer read a paper on this subject.

Dr. August Caille said he was very much interested in Dr. Fischer's paper, detailing his experiments in this line of research—certainly an original one in this country. He was not surprised to hear that the bacilli of diphtheria had been discovered in sewer air. Diphtheria has been endemic in New York City for the past thirty or forty years, and the records of the Health Board for the past twenty-two years show an annual death-rate from the disease of about one thousand five hundred to one thousand eight hundred. At present the annual death-rate from diphtheria in this city does not exceed two thousand, and if we take into consideration the largely increased population, we certainly have good reason to thank the Board of Health for its efforts in this direction. In the erection of tenement and private houses, the sewer pipes should be placed entirely outside the walls of the house, preferably in the rear, so that when the gas escapes from the pipes, and this cannot be avoided, it will not get into the living apartments. The public schools, Dr Caille said, are the great centres for the spread of infectious diseases. It has been suggested that physicians should be appointed to inspect the children's throats as they enter the school in the morning. Such a scheme is entirely feasible, and would go far toward preventing the spread of diphtheria in this city. Another method is by personal prophylaxis. We know that the diphtheritic bacilli find an entrance through a damaged mucous membrane, and that they are frequently present in the buccal cavity, in carious teeth, and in the lacunæ of enlarged tonsils. Personal prophylaxis consists in removing these morbid conditions, if they exist, and in keeping the naso-pharynx and throat as clean as possible by the use of mild antiseptic solutions, such as boric acid.

Dr. Henry D. Chapin, the Chairman, said he desired to endorse what Dr. Caille had said about the schools. They are responsible for many cases of diphtheria, and this he thought was partly due to the lack of proper drying-rooms. On a wet day the children are obliged to hang their damp clothing over a bench in the rear of the room, perhaps close to a steam radiator. If their clothing contains any Loeffler bacilli, this certainly is a favorable opportunity for their development and propagation.

Mr. Charles Wingate, C. E., said that the source of diphtheritic infection is ofttimes so intangible that it escapes detection. Too little attention has been paid by physicians to the subject of foul or damp air (not only sewer-air) as a causative factor in disease. If the soil of this city could be drained absolutely dry, the death-rate from infectious diseases would probably be reduced by one-half. The low death rate of the city of London is due to the fact that its watercourses have been lowered thirty feet below the surface. The maps issued by the Board of Health of this city showing the localities of the various epidemics that have occurred, also show conclusively that these localities are situated over a watercourse or on made ground. In one house on Washington Street, within a block of the river, and with plenty of fresh air, sixty-three deaths have occurred within the past twelve years. Forty per cent. of the houses on Cherry Street have had at least one death during the past year. This record is paralleled in other portions of the city, and it shows that unfavorable local conditions exist. Pasteur has taught us that dampness is the important factor in developing germs, and its importance should not be lost sight of. The penetrability of sewer-gas, under very slight pressure, is often remarkable. It may be entirely odorless. Referring to the Board of Health, Mr. Wingate said he did not think that body has done its duty in connection with the prevention of infectious diseases. There has been, in late years, a decided improvement in the character of the houses erected in this city, as well as in the plumbing, but there has been no corresponding improvement in the death-rate.

Dr. G. W. Rachel said he did not think sewer gas was responsible for many cases of diphtheria. He was very much interested in Dr. Fischer's paper, which for the first time makes it plain to us that there are really diphtheritic bacilli contained in sewer gas. In the majority of cases of diphtheria, however, he thought the infection was carried from person to person, or was due to the dry secretions, which floated in the air. Dr. Rachel thought it would be almost impossible to eradicate diphtheria. It would necessitate the destruction, not only of clothing and furniture, but of entire blocks of tenement-houses. Carpets are a favorable medium for the propagation of these micro-organisms.

Dr. Hadden said that the contagion may be carried from one floor to another in tenement houses by running up along the waste-pipes. Many diseases that are laid to sewer-gas, *per se*, cannot be traced directly to it. Foul air, whether it be sewer-air or not, will always intensify rather than produce any particular disease. The Board of Health could do much good by teaching the families in the tenement-house districts how to live, impressing upon them the importance of cleanliness, etc. Many diseases, Dr. Hadden said, may be traced to animal sources. He has seen a disease closely simulating diphtheria in the horse; also in cats and dogs. He has seen whooping-cough in a dog, at the same time that children in the family were suffering from the disease. Scarlet fever sometimes originates in cats. Two of the most virulent cases he has seen could be traced to no other source.

Dr. Fischer, in closing the discussion, stated that his paper had been misunderstood by some of the speakers. He said in his paper that he had found cases of diphtheria occurring in private and tenement houses wherein sewer-gas escaped, but he did not say that sewer-gas was the cause of the diphtheria. He agreed with Dr. Caille's statement that the schools are great culture grounds for the propagation of infectious diseases.

SECTION ON PUBLIC HEALTH.

Stated Meeting, January 18, 1893.

S. T. Armstrong, M.D., Chairman.

Disinfection at Quarantine Stations, More Especially Against Cholera.—Dr. George M. Sternberg, U. S.A., read the paper, in which he gave the results of some recent experiments which he had made with reference to the viability of the comma bacillus under different conditions of moisture, sunlight, etc. The cultures were from cases occurring at New York Quarantine last fall. He found that bouillon cultures put in the sunlight without moisture survived not longer than four hours, and in the dark not longer than forty-eight hours. The result in the dark closet was attributed to desiccation, while in the sunlight it was probably due largely to ozone, and not to a change produced in the bouillon by the action of the sun-

light. In moisture and dark the spirillum retained its vitality eight days, but on the tenth day it had become dry, and no cultures could be produced. When placed between several layers of blankets the moisture had been absorbed from the culture by the blankets inside of forty-eight hours, destroying the spirilla. His experiments justified the conclusion reached at the International Sanitary Conference at Rome, that the disinfection of merchandise and mails was unnecessary, provided they were dry when shipped and were so on their arrival; and that one of the best methods of disinfection was by exposure of the contaminated or suspected articles to fresh air and sunlight.

But certain kinds of merchandise shipped to this port from Hamburg and elsewhere were in a moist state, such as beet-sugar; and to assure himself of danger or absence of danger from such articles he had made another set of experiments at the same laboratary, the Hoagland, consisting in placing cultures in cotton between sacks of beet-sugar, in fruits, dried fish, drinks, etc. In the case of beet-sugar the culture spirillum was destroyed in forty-eight hours, the time being somewhat longer or much shorter in the case of other forms of moist merchandise—even five to seven days in certain fruits under moist and favorable conditions. So far as beet sugar was concerned, he did not think it necessary that this should be disinfected. The spirilla lived in unsterilized milk only twenty-four hours; in sterilized, they were living at the end of nine days. This was because the antagonistic bacteria in sterilized milk had been killed. His experiments with steam disinfection had shown that with a temperature of 64° C., cultures of the cholera spirillum in blankets were destroyed, that the same was true of typhoid bacilli, but that sarcina retained their vitality. While steam was effectual, yet if it were not entirely dry steam and the clothes should come out at all moist, they should be dried before being put back into trunks; for, if any of the spirilla should not be destroyed, they would retain their vitality longer in damp than in dry fabrics. Then, too, the clothing would be injured if put away moist. The thermal death-point of the comma spirilla in moisture was 50° C.; ten minutes' exposure, 60° C., would certainly be effective enough, but since the clothing might not be sufficiently spread and opened up, he would recommend 80° C.; as free exposure in the disinfecting chamber was necessary, and the articles must come out dry, he asked why not in the first place disinfect with dry heat? For cholera spirilla 60° C. would kill all in twenty-four hours, and 80° to 100° C. exposure in dry air would be effective beyond a doubt. But no two articles should be folded upon one another, for the penetrating power of dry heat was slight. A current of hot dry air would be best. Soiled or laundry clothing would best be boiled and hung on a line and dried. Mattresses and pillows should be destroyed or thoroughly dried in a hot-air oven, preferably provided with an exhaust-pump, or be long exposed to a current of hot air. The importation of rags should be prohibited. On shipboard the germicidal action of dry air and sunlight should be kept in view. Bichloride solution could be used for washing down the walls of infected compartments. But it hardly seemed necessary to use this agent or steam in cabin rooms when only the steerage was infected. Whitewash was reliable for plastered walls. By careful application of these rules cholera could be kept out of our country, without going to extremes which would work undue hardship on individuals and companies.

Dr. Herman M. Biggs opened the discussion. Experimental data now simply confirmed what experience had shown to be true, of the germicidal powers of sunlight and fresh air. Abundant exposure to daylight, for a considerable period of time, he believed to be one of the best disinfectants at hand. It was only a question of its application to the thing to be disinfected. As to sugar, experiments carried out at his suggestion had given results similar to those obtained by Dr. Sternberg. The cholera spirillum, he said, was so easily destroyed that it seemed to him little matter what means were employed, provided they were faithfully carried out—dry heat, moist heat, sunlight, boiling water, sulphurous acid gas, etc. The latter, sulphurous acid gas, or sulphurous acid, was a most efficient means in connection with moisture, which usually was present or could be produced, and provided, also, that articles to be disinfected were reached by the agent. Formerly, when he thought SO_2 was useless as a disinfectant, it was due to incomplete observations; that is, moisture was absent, and in that case it would not destroy germs; but further investigation had shown it to be a most efficient agent along with moisture, for there even the acid alone would kill the germs. Burning sulphur would answer, with moisture. As to heat as a germicidal agent, it was easy enough to learn what degree of heat was required to kill a given germ, but it was not easy to say in practical disinfection whether all the germs had been exposed to that degree of heat. For instance, he had found that frozen blankets four or five deep, put into a chamber with a temperature not less than 230° F. for an hour and a half, came out with those in the centre still cold. For laundry material, he thought Dr. Sternberg's suggestion to use boiling water was quite proper, and it had been used here with much satisfaction by passing steam through the water. To get currents of air they found the exhaust-fan satisfactory. He would have no more fear from isolated cases of cholera in New York than from whooping-cough; the only trouble from it would be due to the panic excited among the public and damage to commerce. Look out, though, for the Croton water-shed.

Advises Extra Precautions.—Dr. E. O. Shakspeare, of Philadelphia, thought the question of disinfection at quarantine one of extraordinary importance to this country at the present time, for there was not only great danger of cholera being introduced during the Columbian Exposition, but the danger would continue four to six years—the shortest time cholera had ever taken to disappear after effecting an entrance into Europe and America. The cholera spirillum might be easy to kill, and the spread of the disease might be easy to control in New York, provided the water-supply did not become infected; but not all places had so efficient a board of health as New York, nor a water-supply which could be so well protected. If the disease should reach Chicago, it would go all over the country, besides working immense damage to commerce, especially by keeping our South American neighbors away. We were justified, under the circumstances, in erring on the side of safety by taking extreme measures. To injure companies or individuals a few dollars or a few thousands of dollars, was not to be considered when the interests of a nation were at stake. A most efficient means of disinfecting steamship compartments was by steam, and one should not hesitate to use it because of injury to paint or veneering. As to sunlight and dry air, they certainly could not be relied on in steerage compartments, where it was both dark and moist. In Philadelphia they had for a time a chartered boat fitted up for the application of steam to immigrants' clothing, etc., and for giving them a bath; so that while taking a bath the clothing was disinfected by dry steam, the whole process taking about forty minutes; or the articles might be boiled. The whole procedure should be applied scrupulously and expeditiously.

Dr. Albert Gihon, U. S. Navy, said that on board ship sunlight and dry air were applicable for clothing hung out on a line, but it could not be carried out for disinfecting living compartments. Nor could sulphur dioxide be applied effectually, because of the bad smell; so that we had to fall back on steam, which was best used superheated, paying no attention to veneering and varnish.

Dr. Sternberg closed the discussion, and impressed the fact that what was wanted was efficient disinfection scrupulously carried out, but avoidance of such extreme measures as did harm to individuals and commerce, and, because superfluous, brought science into disrepute.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, held at the New York Academy of Medicine, Tuesday Evening, January 3, 1893.

Some Remarks on Oxaluria and its Relations to Certain Forms of Nervous Diseases.—Dr. I. Adler read a paper on this subject. He stated that the presence of the oxalate of lime crystals in the urine has been the subject of much discussion. Our present knowledge regarding the subject is rather unsatisfactory. There is much that is still obscure pertaining to it, and on very few of even the fundamental points has unanimity of opinion been obtained. Most plants and vegetables used as food contain oxalic acid, some of them a very large percentage, and all or nearly all of this taken into the system reappears again in the urine—some perhaps in the fæces. From this it appears that oxalic acid does occur in the urine of healthy persons. On this point all authors are now agreed. It is also probable that oxalic acid may originate in the course of normal metabolic changes. The presence of oxalic acid in the urine was once believed to be due to the incomplete oxidation of uric acid, but this theory no longer obtains. The fact that uric acid can be separated into urea and oxalic acid does not prove the above theory.

Oxaluria, as an independent type of disease, Dr. Adler said, does not exist. The speaker then reviewed Cantani's treatise on this subject, in which that author asserts that oxaluria is a distinct disease characterized by certain well-marked symptoms, among them being insomnia, loss of appetite, melancholia, suicidal tendencies, headache, constipation, sexual impotence, emaciation, etc. These symptoms, Dr. Adler said, were not due to the presence of oxalic acid in the urine. To prove this fact he had had a careful quantitative analysis made of the amount of oxalic acid (also determining the amount of urea and uric acid) contained in the urine of a large number of persons suffering from various diseases, such as neurasthenia, the gouty diathesis, etc. In some of these cases the symptoms ascribed by Cantani as due to oxaluria were present, but no possible relation could be traced between them and the amount of oxalic acid in the urine.

In concluding his paper, Dr. Adler made the following statements: 1. That oxalic acid is a normal, although possibly not a constant, constituent of the urine. 2. The amount present in a given quantity of urine can be determined with any degree of accuracy only by a quantitative analysis. 3. The chief source of oxalic acid in the urine is the oxalic acid contained in the food. It is probable, however, that minute quantities are produced in the course of normal metabolism. 4. Impeded respiration and diseases of the heart and lungs do not of themselves tend to produce an excess of oxalic acid. 5. The establishment of pathological oxaluria as a disease *sui generis* cannot be done. 6. The nervous symptoms ascribed to pathological oxaluria are not caused by an excess of oxalic acid in the urine. 7. Where such excess does occur, which cannot be accounted for by the ingesta, it is probably one of several symptoms of metabolic changes, primarily caused by alterations in the nervous or digestive systems, or both. 8. In examining the urine for oxalic acid, it is of the utmost importance to consider its other ingredients as well, particularly urea and uric acid.

Dr. C. A. Herter referred to the various methods of making a quantitative analysis of the amount of oxalic acid in the urine, and the enormous amount of labor involved. He did not agree with Dr. Adler's statement, that a great many cases of so-called oxaluria are not pathological. He is not prepared to accept the proposition that there is no such thing as pathological oxaluria. He is inclined to think that in cases where we have defective digestion, especially in the intestines, the carbohydrates are likely to be transformed into oxalic acid where normally they would not be so transformed. He does not believe, however, that oxalic acid is ever the cause of the symptoms named by Dr. Adler. We must take other constituents of the urine into consideration, such for instance, as uric acid and creatinine; the latter is a substance in which even more nitrogen is excreted than in the uric acid. The ethereal sulphates in the urine must also be considered. They are often present in excess in neurasthenic conditions where there is oxaluria, and where there is also an excess of uric acid. Dr. Herter said he is inclined to think that the old theory of the formation of oxalate of lime out of uric acid is an exploded one.

Dr. L. Weber said that his clinical observations were fully in accord with the ideas expressed in Dr. Adler's paper. He does not believe in the existence of a disease to be designated oxaluria, but he has met with many cases of a disordered state of the system, brought on by various causes, in which he found (not by quantitative analysis, but by frequent and careful examination with the microscope) oxalic acid in the urine, besides, in every case, an increased amount of uric acid.

Dr. Charles Heitzman stated that he sees many cases of so-called oxaluria, and the appearance of these patients is usually characteristic. Sleeplessness, indigestion, and fits of melancholia are the more common symptoms he has found in them. Contrary to Dr. Adler's experiments, he has usually found the specific gravity of the urine high, from 1.024 to 1.036. Regarding the treatment of these cases, Dr. Heitzman recommended a meat diet, the exclusion of sugars and farinaceous substances, and vigorous outdoor exercise. He stated that he felt convinced that there is a condition of the system wherein the amount of oxalic acid excreted by the urine is far in excess of that taken in with the food, and he could not agree with Dr. Adler's statement that there is no such thing as a real pathological oxaluria.

Dr. Mary Putnam Jacobi stated it seemed to her that Dr. Adler's conclusion, that the oxalate of lime contained in the urine is rather an accessory product of a disordered function than a cause in producing it, is very true. She referred to some experiments made by Dr. Chadwick, of Boston, in a series of cases in which the patients were operated upon on the supposition that there was a stone in the pelvis of the kidney. No stone was found, but the symptoms disappeared. In these cases the attacks of renal colic were followed by a copious discharge of oxalate of lime crystals in the urine, after which the patients remained quite free from pain for some time.

Dr. E. D. Rockwell said he was much interested to note the frequency with which oxalate of lime crystals have appeared in the urine in certain neurasthenic cases associated with a disordered heart's action. Such a case recently came under his observation. A physician, who suffered from neurasthenia and had frequent attacks of palpitation, noticed repeatedly that this excessive heart's action was always associated with an abundance of oxalate of lime crystals in the urine. Dr. Rockwell said he had also often found them present in large quantities in spermatorrhœa.

The President said that we cannot study neurasthenic conditions carefully without coming to the conclusion that the trouble lies in the chemistry of nutrition. It is very easy to jump to the conclusion that any substance of an abnormal character in the urine or fæces gives rise to a certain morbid condition, but this is a wrong conclusion. The oxalates, the urates, indican, etc., may occur in excess in the urine, but they are end products. The statements made in Dr. Adler's paper, based on such careful quantitative analyses of the urine, should be regarded as very valuable. It is much more difficult to destroy a wrong theory than to originate a new one.

Dr. Adler, in closing the discussion, said that the local precipitation of the oxalates seems to be independent of any positive excess excreted. Calculi consisting of the oxalates can form in the kidney and bladder without there being an absolute excess of the salts in the urine.

Report of a Case of Cystic Tumor of the Brain Operated upon with Success.—Dr. Leo Steiglitz presented the patient. The patient was a female, twenty-five years of age. She was married in April, 1891. Previous to her marriage she had always been well; there is no hereditary taint of any kind, and no history of traumatism or convulsions prior to her present trouble. In October, 1891, the patient, while quietly talking with her husband, suddenly felt twitchings in the thumb and forefinger of the right hand; the convulsive twitchings spread rapidly, extending up to the shoulder and face, and led finally, within the space of a few minutes, to a general seizure, with loss of consciousness, cyanosis, frothing at the mouth, and tonic and clonic convulsions. An attack similar in character to the first one occurred seven weeks later, followed by a number of others. Suspicion of a localized cerebral lesion was aroused, although the patient offered absolutely no further symptoms; she had no trace of headache, nausea, giddiness, choked disk, etc. She was put upon the bromides, and after January 19, 1892, she had no general convulsions at all; simply convulsive twitchings confined to the right hand and forearm, and always beginning in the thumb and forefinger. These attacks occurred almost daily. Although no history of syphilis could be obtained either from the patient or her husband, she was put on specific treatment for a time, but no improvement followed. In February, 1892, a marked paresis of the right hand developed. The deep reflexes were increased, more marked on the right than on the left side. The dynamometer test showed 25 on the right side, 55 on the left. The urine contained neither albumin nor sugar. There was no temperature disturbance. There was no disturbance of sensation in any part of the hand or arm, excepting a general feeling of numbness.

The diagnosis arrived at was: Organic lesion, probably a tumor, situated in the left anterior cerebral convolution. An operation was performed on the patient by Dr. Gerster, on June 25th, at Mt. Sinai Hospital. A lateral opening in the skull having been made, the dura was seen to bulge but slightly into it. An area on the dura, about the size of half a dollar, showed a diffuse yellowish tinge, different from the color of the adjacent dura. The application of the poles of a small faradic battery to the unopened dura, by Dr. B. Sachs, promptly determined the centre for the movements of the hand and fingers, and the point corresponded with the discolored area referred to. When the dura was opened, the cortex of the brain showed no apparent change. A vertical incision into its substance was followed by a gush of yellowish serous fluid, none of which, unfortunately, was saved. Perhaps one ounce of fluid escaped. The walls of the cyst were found to be perfectly smooth. A small layer of gray matter was removed from the centre exposed, upon the advice of Dr. Sachs, to prevent disturbances which might develop from possible secondary sclerotic changes. There was but little shock after the operation. The day following it the patient had lost all power in her right thumb and forefinger, and could move her other fingers and the entire right arm but very slightly. This symptom gradually improved. On July 21st the patient had slight convulsive twitchings in her right hand, arm, and face. On July 28th she had more violent twitchings. On August 7th the scalp wound was opened and adhesions found between the flap of skin and the dura. Probing revealed no recurrence of fluid in the cyst. The adhesions were separated, and a flexible gold plate inserted. August 9th, slight twitching in three ulnar fingers; patient could move her fingers, hand, and arm quite extensively. Upon examination, in November, it was found that the patient had lost the sensation of position in the fourth and fifth fingers of the right hand: she could not tell whether they were flexed or extended. The strength of her hand and arm were greatly increased. December 10th, considerable twitching in right arm and face. The patient had been kept on from fifteen to thirty grains of potassium bromide per day since the operation.

In concluding the history of the case, Dr. Steiglitz said he was inclined to believe that there is a glioma at the bottom of this patient's trouble. In that case there is reason to fear a further growth of the gliomatous materia presumably left in the walls of the evacuated cyst. Symptoms have already developed which tend to confirm these fears. As to the further treatment of the patient, he would like to have another operation performed, and the entire cyst, or its remains, removed, if possible.

Dr. A. G. Gerster, who had operated on the patient, said that at the time of the operation the advisability of removing the cyst wall was considered, and it was decided that it could not be done, on account of the delicacy and thinness of the membrane. In his opinion it could not have been separated without tearing it into shreds. In operations on the skull, Dr. Gerster said, he prefers the gouge and mallet to the trephine; he is not hampered by the size and shape of the trephine, and can remove as little or as much of the bone as he chooses. He also referred to the profuse hemorrhage accompanying operations upon the head, and the serious difficulty the surgeon often finds in checking it. Peripheral constriction, by means of an elastic bandage, proves inadequate. The hemorrhage is not alone from the scalp, but from the diploic substance and the vessels which course through the brain itself.

The President said that the futility of peripheral constriction as a means to check hemorrhage in operations about the head has been testified to by Dr. Weir and others. The least hemorrhage he has ever seen in such a case was in a patient who was kept in the sitting posture during the entire course of the operation. In another case, operated on a short time ago by Dr. Briddon, chloroform was administered instead of ether, and the amount of blood lost was much less. Regarding the excision of the cyst wall, Dr. Starr said he doubted if that was possible. Furthermore, there is probably gliomatous infiltration into the brain substance. In a brain cyst evacuated by Dr. McBurney, drainage was kept up for fifteen days, when the walls were found to be adherent to one another, there being no cavity left. Out of eighty-seven recorded operations for the removal of brain tumor, forty-six per cent. were successful in the finding of the tumor and in the recovery of the patient. Successful operations for the relief of epilepsy are very rare. Out of ninety-seven recorded cases, three had no recurrence of the attacks within six months subsequent to the operation. Most of these cases were reported too soon.

Hemiatrophy of the Tongue.—Dr. M. Allen Starr presented the patient. The patient, a female, was perfectly well until last June, when she was suddenly seized with pain in the back of the neck and the occiput, and the next day she noticed that something was wrong with her tongue. It was strongly deviated to the left and has remained in that position ever since. It has become decidedly atrophied, and presents well-marked reaction of degeneration. There is no pain nor disturbance of taste.

Peritonitis from Vulvitis.—Dr. Legroux, of the Trousseaux (Children's) Hospital often draws attention to the significance of abdominal pain and vomiting in little girls affected with vulvitis. Such symptoms reveal the presence of peritonitis due to the penetration of the microbes of the vulvar pus into the peritoneal cavity *viâ* the uterus and the Fallopian tubes. In one such case which terminated fatally there were found post-mortem a collection of pus in one of the tubes and numerous peritoneal adhesions in the pelvis.—*Lancet.*

The Dose of Santonin for Children.—Dr. Demme considers the smallest efficient and perfectly safe dose of santonin to be from one-sixth to half a grain, or from one to one and a half grain a day. As a vermifuge he always associates santonin with calomel.—*Revue des Maladies de l'Enfance.*

Correspondence.

OBLIQUE ENTERORRHAPHY.

To the Editor of the Medical Record.

Sir: Since the publication of my paper on oblique enterorrhaphy I have received many letters asking for information on points which were not made quite clear.

As the letters come each week now with as much regularity as they did then, and as many repeat the same questions, I thought I would give a few notes of explanation which might cover the points most frequently raised, and which could be thought to include the most darkened spots on which any of your readers might desire light.

"Do you revolve the intestine on its axis and leave it with the mesentery on one side of the junction 180° from that on the other?"

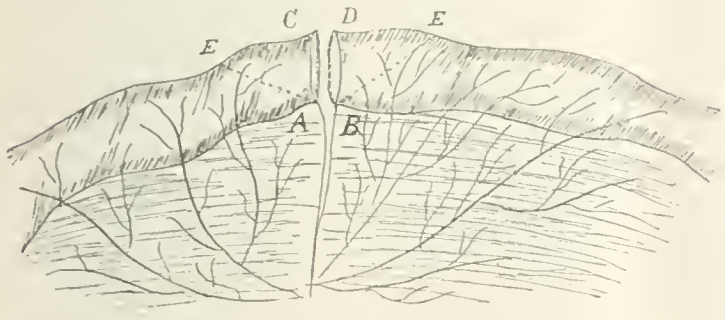
Yes; the mesentery of one cut end is diametrically opposite the other, each cut end of bowel being given a quarter turn on its axis of 90° in opposite directions.

"What is the object to be gained by placing the mesentery of one cut end in apposition with the convex surface of the other?"

There are several reasons, each of which I deem very good. It will be remembered, in that series of experiments, I started out with the idea of making a modification of the plate operation—an end-to-end modification—with no blind pouches if possible. One reason for giving the cut end of intestine a quarter revolution on its axis of 90° is that no ill results seemed to follow the plate operation in anastomosis in which the bowel is given the same identical twist.

Another reason for placing the mesentery of one end of bowel opposite to that of the other portion I will try and explain.

In the bowel, as shown by the illustration, I would



ask, Where is the weakest point? I regarded it as at *C* and *D*. Why? Because these points are farther removed from the nutrient artery than any other, and in a circular "end-to-end" operation if gangrene was to supervene it would be at this point.

Now as we have found that no ill effects arise from a half or quarter twist of the bowel, why not cut off the weak corners (as indicated by dotted lines) and place the mesenteric side of one end in apposition with the convex side of the other, so that the strong mesentery of the one will, in a short time, send vessels out into the weak convex side of the other end.

In the dog I do not think this point of much importance; but in the weak, diseased human intestine is not the point worth considering?

Still one more, and a very important, reason is, that the mesentery when perfectly sutured will fall in place and cover the knot, for when the suture I described is properly made everything is buried, nothing but peritoneum appears. It is like the plate operation in this respect.

Again, in dividing the intestine, as represented by the dotted lines, the possibility of narrowing the lumen of the bowel is prevented, as it is obvious to all that in an oblique union the bowel from *A* to *E*, and *B* to *E*, has a larger internal diameter than from *A* to *C* and *B* to *D*, as when a circular or "end-to-end" union is made.

"Does traction in tying the threads tend (if made too tight) to gather or pucker the line of suture?"

The traction on the threads before the knot is made cannot injure, but the knot must be drawn with judgment, while the assistant pushes, with anatomical forceps, the mesenteric end into the bowel under the convex end. This part of the operation is very important. The line of suture will "pucker" if when tying the knot the threads are pulled too tight; my custom is to make traction on both threads one after the other, to be certain that the sides are all right, then the knot is applied simply to keep the mesenteric end inverted and under the convex end. The knot is buried between the convex surface of one end and a fold of mesentery of the other end, covered by peritoneum.

When an anastomosis is made the knots are covered by the convex surface falling over and around the knot at each end, no thread or knot appearing in sight when suture is complete.

In the circular end-to-end union one surgeon said that he began his stitches at the convex surface, which is wrong, as nothing is to be gained thereby, and it will be almost impossible to cover or bury the knot at the convex side without retaining or Lembert sutures, a thing that should not be thought of in any improved suture.

When making the circular one-knot operation it is my custom to remove a small wedge shaped portion of intestine, place the cut ends, mesentery to mesentery, and convex to convex side, and begin the suture at the mesenteric side of one cut end, passing the needle from without inward, through all coats of the bowel. The first half of the union is made with the looped stitches, and the second half with the tight; or the first half can be made with tight stitches and the second half with the stitches parallel to margin of cut ends. The requisite amount of traction is then applied to both ends of the suture; countertraction may be made by the assistant, with a thread passed under the middle stitch on the convex side—this prevents a "pucker"—the ends tied, and the knot is buried beneath the folds of mesentery.

This suture can in no way be likened to the continuous, Lembert, etc., as each stitch penetrates all coats of the wall of the bowel. Of the twenty-five experiments where I have used this suture there have been but two deaths, the last eighteen making rapid recovery, and in no case had a setonic (satanic) drain established itself.

Any reply to the criticisms or comments in the letter on page 550 of the Medical Record seems to me useless, as the writer most effectually disposes of his own claims. "His'n is just like mine, except that mine is altogether different." How a man who has been abroad with the masters, published a work, has a "base ball" and "stove-pipe" suture, a "raw-hide," etc., can claim the suture I describe as an infringement on his patent "two to five and tie," is almost lamentable.

When he tries the suture described in the Medical Record of September 17th, before the "class of practitioners he gives courses to," he will find that "three to five continuous stitches and tie," leaving three to five setons, and knot, to act as drains, dangling inside and out of the bowel, is no more a part of the suture I described than is the "stove pipe."

Now, a few words in conclusion. It seems as though the day is not far distant when some one suture will be accepted and recognized as the best method, the ideal suture; and we can safely say that the day of the plate operation is nearly gone, its mission filled, as it has set the brainiest men on both continents to thinking.

It is the opinion of the writer that the ideal suture of the future has not been discovered, much less tried, and that it will be an end to-end modification of the "plate," with all sutures and knots buried, no blind pouches, no Lembert, no retaining sutures of any kind. "All kinds

of sutures" have not yet been tried, and it will require more than two hundred and twenty-five dogs to try them properly.

If nothing more, the suture which I described has a value in going to show that the former methods, where twenty to thirty knots were employed, are no longer necessary; that gastro-enterostomy, chole-cysto-enterostomy,[1] anastomosis, and oblique enterorrhaphy have been performed successfully with but two knots, and without plates; that circular enterorrhaphy has been made with but one knot, and only two deaths in the first twenty-five experiments. Is not this a step toward the ideal of the future?

M. E. Connell, M.D.,
Superintendent Milwaukee County Hospital.

MALARIA AND DRINKING-WATER.

To the Editor of the Medical Record.

Sir: I was much interested in Dr. von Wedekind's account of "Intermittent Fever in Southwest Africa," in the Medical Record of January 7th. I should like to know how long the five men drank ship's water, and also if any who were exempt from the fever drank water from the land.

My limited experience leads me to believe that the malarial poison enters the system only or chiefly in the water drunk. Five out of a family of six (adults and children) have suffered pretty continuously for the past six years with malaria (so diagnosed by the best physicians), at times being quite seriously ill, with temperature reaching 104° F. Quinine, of course, was freely administered with only temporary effect. Seven months ago a Pasteur filter was put in the house, and quickly every symptom of malaria disappeared. Another family has had about the same experience. I should be very grateful if Dr. von Wedekind would answer my questions, for I am anxious to learn whether my theory is tenable or not. To know how to prevent the work of this insidious foe would do much to raise the standard of health in many sections of our country.

E. D. S.

January 13, 1893.

Catheterization in Prostatic Enlargement.—Professor Guyon, says the Paris correspondent of the *Lancet*, never tires of emphasizing the necessity of frequent catheterizations for the subjects of prostatic hypertrophy. This is the only way of preventing stagnation of urine and its corollary increase of tension of the bladder-walls—the two dangers *par excellence* to be avoided in such cases. Hypertension induces congestion and the experiments of M. Reblaud show that congestion favors microbian infection, not only of the bladder itself, but of the ureters and renal pelvis. Even when the bladder is already infected repeated catheterism is the best safeguard against ascending pyelo-nephritis. One of Professor Guyon's patients had practised hourly catheterism without regard to antiseptic precautions for a period of twenty-six years, with the result that, although the bladder became infected the kidney remained healthy, and the "prostatic" lived to the age of one hundred and two. M. Guyon reminds us that the sensation of the *besoin d'uriner* becomes frequently dulled in these patients, and that consequently this must not be waited for before passing the catheter.

Where Laparotomy is Rare.—Professor Giuseppe Ruggi, of the University of Bologna, recently performed his fiftieth successful laparotomy. He and his friends were so pleased with this (in Italy) novel and magnificent task that the event was celebrated by giving a banquet and striking off a gold medal.

[1] The chole-cysto-enterostomy was made November 14th, and the subject is alive and well twelve days after the operation. The circular enterorrhaphy with but one knot was made at three points of the intestine of a dog at one sitting. The animal is well ten days after the operation.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 21, 1893.

	Cases.	Deaths.
Typhus fever	16	11
Typhoid fever	9	3
Scarlet fever	141	17
Cerebro-spinal meningitis	4	6
Measles	97	9
Diphtheria	99	35
Small-pox	7	1
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

State Medical Laws.—In the *Medical Review* this topic is dealt with at some length. Our contemporary first surveys the conditions at present in actual existence so far as the laws regulating the practice of medicine in this country are concerned. The article then goes on to say; "We find a vast heterogeneous mass, no two States having the same statutory enactments. The entire mass, however, may be divided into several large groups which are about as follows, some prevailing in a number of States, others in but a few, and some in but one: 1. We have those States in which there are no restrictions whatever in regard to the practice of medicine. 2. This class includes those States in which there is but one requirement—to file a copy of a diploma with the county clerk; or, in case of failure to have a diploma, to pass a perfunctory examination before the County Medical Board. 3. There are States more strict in the requirements which are that the diploma which is registered emanates from a reputable medical college, this latter simply signifying that it is not a recognized diploma mill. 4. Some States require the applicant for a license to practise medicine to file with the State Board of Health a diploma emanating from a college in good standing, by which is meant an institution which requires attendance upon lectures for a certain fixed number of years, in default of which the applicant is examined by the Board. 5. In these States no diploma whatever is recognized. Each and every applicant for a license to practise medicine and surgery must appear before the Board and pass an examination satisfactorily, in default of which no license is issued. 6. Finally, we have the system where every applicant for a license to practise must pass a satisfactory examination before the Board of Regents of the State University, except the graduates of those institutions in the State whose diplomas have been recognized by the above Board.

"Such, in brief, are the different laws of this country in reference to the practice of medicine. They all have one object in view—the elevation of the standard, but it is a question as to whether this laudable end is accomplished. In regard to the first category, in which are included those States having no requirements whatever, the law is simply infamous. It permits every mountebank, every charlatan, every pretender, every ignoramus to prey upon a credulous and too confiding public. Any law would be better than such a mockery. Yet this condition is one existent not in the wild and uncouth West, but in the cultured and intelligent East. At least we would be led to this view when we take into consideration the States in which this utter lack of control has its existence. Upon looking over the remainder we find that they are either too lax or too arbitrary, such as that mentioned in paragraph 6, where applications from without the State are not met with that leniency which is shown to those emanating from residents; the idea being, presumably, to keep interlopers away and afford a sort of protection to

the residents. This is certainly a most arbitrary method of dealing, and one which is certainly not in accord with our ideas of justice in this country. We are not opposed to the resolutions adopted in some States, whereby the diplomas of European countries not recognizing those granted in the United States shall not be recognized. This is certainly nothing but just; but it is not just for one State to discriminate against any other; for, while empowered to govern itself independently to a certain degree, each one, after all, is but part and parcel of the great confederation of States which goes up to make this the greatest republic on the face of the globe. All the State laws for the regulation of the practice of medicine differ more or less from each other, and no State will accept the license issued by another. It consequence, if a practitioner desires to remove to another State, either temporarily or permanently, he cannot do so until he has gone through the formality, and oftentimes annoyance, of complying with the laws of the new State in which he finds himself. This is not the only evil. Whenever a large number of individuals, or a small number for the matter of that, if they have the influence, desire to limit the number of physicians in the confines of their State, all they need do is to pass some oppressive law and forthwith a "protective" wall of the most protective order is erected, and unless the other States resort to similar measures they will be overrun by more than their just due. It is for these and various other reasons that State Medical Laws are not of the best. In the majority of instances the regulation of the practice of medicine is placed in the hands of those who should certainly not deal with such matters. The State Board of Health, as its very name implies, is intended to be a body of responsible individuals whose duties consist in attending to the general sanitary measures which affect the State as such. Such a board should be on the alert to promptly suppress, or prevent epidemics; to enforce such sanitary measures as will conduce to the health of the people; to further all means by which the people will be protected from pestilence and disease. Instead of that the majority are dictating to medical colleges as to their methods of instruction, the length of studies, the subjects that should be taught, etc. They will pay no attention to national nuisances which threaten the lives of millions, but will split hairs upon a technical point of what constitutes a certain percentage in attendance upon lectures, and occupy themselves with a mass of legislative matter bearing upon the methods to be pursued in medical education. In Germany any medical college has the power to grant a diploma, but this in nowise entitles its holder to practise medicine. He can only acquire this right by passing a state's examination (Staats Examen). This is perhaps the best method to pursue, as no favoritism is shown and it is uniform. A similar method in this country would certainly be vastly superior to the chaotic condition which now prevails. The laws in relation to the practice of medicine should be enacted by the General Government, and thus uniformity throughout the United States would be secured. This would certainly not interfere with any of the rights properly appertaining to the individual States. Moreover, a uniform system of examination for the obtaining of a license should be adopted, so that once obtained the license would entitle the holder thereof to practise anywhere in the land. The various qualifications necessary to entitle an individual to the privileges of an examination could be easily determined; and the matter of determining how and by whom examining boards should be constituted are matters of detail which would entail but comparatively little trouble. It is absolutely imperative that a uniform system should prevail as well as that the rights conferred should be of national scope. To accomplish this there can be but one method, and that is by the enactment of Federal laws."

Paris Kitchens are Insanitary.—The Paris correspondent of *The Lancet* says that "foreigners who enjoy the occasional luxury of a dinner at a fashionable Paris restaurant little dream of the unhealthy, not to say disgusting, surroundings of the myrmidons whose duty it is to prepare the appetizing viands sent upstairs. A peep at the kitchen in too many celebrated establishments would assuredly have the effect of dispelling the appetite of even a burly Yorkshire farmer. This is abundantly proved by the report just made to the Conseil d'Hygiène de la Seine, by M. Deschamps. This report is based on the investigations of Drs. Calendreau and Regeard, medical officers to the Société des Cuisiniers de Paris. Dr. Regeard says of these kitchens that they are, in fact, the foulest rooms in the house—airless, because the ventilators are kept closed in order to avoid odors in the dining-rooms and in neighboring houses; often also deprived of any other than gas light. The water closets are generally in direct communication with the kitchen, and in many instances, access to them being forbidden during the busy hours of the day, the cooks are compelled to utilize preserved fruit and vegetable boxes as urinals. All the above details are sufficiently disgusting to the customer, but the report would be incomplete were no reference made to the disastrous effects of these insalubrious conditions on the health of the men who pass their lives in these dirty holes. Dr. Calendreau tells us that, in addition to infirmities such as varicose veins, varicocele, and hernia, which are peculiar to the calling, cooks suffer from the following maladies: 1, Rheumatic pains from damp, absence of fresh air and light; 2, sore-throat and bronchitis, due to exposure to draughts and excessive heat, with consequent indulgence in iced beverages; 3, dyspepsia and alcoholism; and 4, pulmonary phthisis. The foregoing list explains the high mortality prevailing among this numerous class. The remedy proposed for this deplorable state of things is as follows: No restaurant kitchen to have dimensions less than, length, 3 metres; breadth, 2 metres 50 centimetres; height, 2 metres 80 centimetres; every kitchen to be independent for air and light of small courtyards; the kitchen to be separate from the scullery; the floor to be waterproof; the larder to be isolated; urinals and closets to be quite apart from the kitchens; the suppression of bedrooms in proximity with the kitchens. The Municipal Council has had the above reforms under consideration, and it is hoped that they will soon be put into execution."

Treatment of Croup.—Dr. N. S. Davis says all the indications for treatment in croup, in the mild or superficial form of the disease, can be filled by the administration of:

℞. Syr. ipecac ..... ʒ ix.
Syr. scillæ comp. ..... ʒ iss.
Tinct. opii camph ..... ʒ ij.
M. Sig.: Half teaspoonful every three or four hours.

The Treatment of Chloro-anæmia by Means of Hot-air Baths.—Traugott reports the successful treatment of fifteen cases of chloro-anæmia by means of hot-air baths. In all, a rapid and considerable increase in the percentage of hæmoglobin, as well as in the specific gravity of the blood and in the number of red corpuscles, was observed; the irritability of the heart, the anæmic murmurs, the febrile attacks, and the neuralgic pains grew less; the appetite returned; the bodily weight increased; menstruation was resumed; and all of the symptoms gradually subsided. In spite of the profuse perspiration, and although the quantity of fluids taken was not increased, diuresis was augmented. In one of the cases the good effect of the treatment appeared to be enhanced by an extraction of blood. In individual cases, from nineteen to forty-two baths were required. The length of the stay in the hospital varied from thirty-three to eighty-four days. The baths were given by surrounding the bed of the patient with barrel-hoops, over which was suspended oil-cloth, while the patient was well wrapped except about the head. At the foot of the bed was placed a wooden box lined with zinc, in which several spirit-lamps

were made to burn. The temperature of the first bath may be as high as 131°, of the subsequent baths from 140° to 152°. In the course of the bath an ice-bag is to be applied to the head.—*Medical News.*

Asepsis and Blood.—It is every day clearer that the most valuable agent which the surgeon has, in his efforts to secure asepsis, is the capacity of the fluids and cells of the animal body to overcome invading micro-organisms. The experiments of Nutall, and of Buchner, and of Nissen, prove the germicidal action of fresh blood-serum, a power which it does not lose even by freezing and thawing. These conclusions have been reinforced by the experiments of Prudden on non-inflammatory transudations of the body. . . . And yet all this is only in the line of what was already known. The very occurrence of self limiting diseases, such as typhoid fever, lobar pneumonia, etc., indicates that there is within the body some sort of adjustment of forces, by which, under ordinary conditions, the deleterious effects of pathogenetic micro-organisms are neutralized. As Prudden says: "The significance of these new discoveries would seem to be very great and far-reaching, in calling back the attention of therapeutical adventurers from germicidal warfare to what appears to be the natural defence of the organism against bacterial invaders, namely, a healthy condition of the blood." Wiser words were never uttered. The natural defence of the organism is a healthy condition of the blood. This is not to be secured by the obstetrician spending forty minutes washing his hands and making his toilet, while the woman is lying in the throes of childbirth awaiting his attentions. This is not to be secured by precipitating the albumin in the normal vaginal secretion with mercuric chloride, and so destroying the natural protection elaborated by the system itself. This is not to be secured by occluding a natural opening of the body, which in a state of health protects itself, and in a state of disease contains already the germs which the occlusion is intended to exclude; and the bacteriologist knows that the micro-organisms grow more prolifically in the culture medium, when the opening to the test-tube is occluded by some impervious material.—Dr. Winterburn

The Fruits of Vivisection.—Sir Andrew Clark has given to *The Hospital* a brief list of the results of experimental research, which may be perused with profit by the anti-vivisectionists. By experimental research surgeons have been enabled to arrest or cure diseases by excising portions of the stomach, by removing one of the kidneys, by amputating the larynx, and by extirpating portions of the brain and spinal cord. By experimental research Koch discovered, in the presence and action of the tubercular bacillus, the true cause of tuberculous disease; and this discovery has not only thrown a flood of light upon the natural history of consumption, but has enabled us to discover its presence when otherwise unsuspected, and to bring about a successful revolution in the treatment of surgical tuberculosis. Furthermore, there are just reasons for expecting that the continuance of this experimental research will lead to the discovery of means for the prevention, and perhaps even the cure, of pulmonary consumption, which destroys so many of the fairest and best of our race. By experimental research we have discovered the condition for using with efficiency and safety almost all the stronger and most useful drugs, such as digitalis, chloroform, ether, chloral, nitrate of amyl, nitroglycerine, and many others. By experiment upon animals we have discovered the nature and relations of infectious diseases; and we have learned how, in some measure, to prevent the development and to control the spread of fevers, cholera, anthrax, and septicæmia. Through experiments on animals we have received the use of the electric telegraph, and all the various services which electricity now renders to the convenience and uses of man. And yet, with all these services before us, one cannot (in England) scratch the neck of a rabbit for the advancement of knowledge without becoming a legal criminal. But, on the other hand, for your pleasure, or for your profit, or for any other object than the promotion of knowledge, you may, without let or hindrance, beat, starve, mutilate, or destroy as many animals as you please. Knowledge can be advanced now only by experiment, and if experiment is to be suppressed, and if consistently the use of knowledge acquired in this manner is to be rejected, then it is certain that the art of preventing and of curing the diseases of beasts and men will decay; that physical and mental degeneration will follow and that science in England will become the contempt and pity of the world. And if physiology, pathology, and therapeutics were to continue their course without the help of experiments upon animals, the errors that would be committed in the exercise of our art would bring about greater suffering and greater unhappiness than all the vivisections which have ever been performed. Lastly, if experimental research hardens the hearts of experimenters, it is only too plain that an active antagonism to it begets a disregard of accuracy, a violation of charity, and a spirit of calumny which have no parallel among ordinary men.

The Expectation of Life.—Mr. Stevenson, actuary of Edinburgh, has contributed to the "expectation of life" tables the most recent information on this subject, in the shape of a paper entitled "The Effect of Employment on Life and Health." Many facts are presented concerning the relation of occupation to mortality-rates. The largest mortality rate in the indoor occupations considered is found among liquor sellers, a fact which explains the reluctance of life insurance companies to write insurance on that class of risks. Mr. Stevenson finds the average mortality among 1,000 liquor dealers to be 29.2, increasing from 12.2 between the ages of twenty and twenty-nine to 102.8 from seventy upward. He divides the liquor sellers into three classes—licensed grocers, hotel-keepers, and bar-keepers—and shows the respective mortality-rates to be, from twenty-five years of age upward, 18.9, 26.8, and 33.4, respectively, which shows that the life risk of the average bar-keeper is an exceedingly hazardous quantity. Among 1,000 gardeners the death-rate is found to be 10.6; carpenters, 12.4; shoemakers, 13.4; stonemasons, 16.8; butchers, 17.8, and inn-keepers, 21.4. This agrees precisely with the information collected by American life insurance companies, which shows the butcher to be a hazardous risk, second only to the inn-keeper and saloon-keeper. The most curious facts resulting from this investigation are those concerning the death-rate among the clergy, a class which the author has divided into three sections, namely, Church of England clergy, Nonconformist clergy, and Roman Catholic clergy. One thousand cases investigated in each of these sections show the death-rate to be lowest in the Church of England clergy, where the average is 10.2, and highest in the Roman Catholic clergy, where the average is 15.7. These figures suggest an interesting contribution to the study of celibacy in its relation to the mortality-rate. The value of out-door exercise, with abundance of fresh air and a clear conscience, is amply set forth in a comprehensive table showing the number, per 100 of the various occupations, that attain the age of seventy or more. Again the clergy tops the list, with 42 out of 100 who attain the age of seventy, while the farmers come next with 40, and the other occupations in the following order: Commercial men (drummers), 35; military men, 33; lawyers, 29; artists, 28; teachers, 27, and physicians, 24. The apparently anomalous feature of these figures is that military men, whose occupation seems to be most hazardous from a layman's point of view, in reality attain a greater longevity than their less warlike brothers of the sciences and arts.

Cremation has been legalized in Denmark, but the practice is meeting with determined opposition on the part of the clergy.

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PRACTICAL DATA ON THE APPLICATION OF WATER IN SOME INTRACTABLE DISEASES.[1]

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THE recent revival of hydrotherapy is an interesting phase of therapeutics in this country. Three years ago the first paper giving a general review of the uses of water, externally and internally, by lavage, irrigation, baths, etc., was read before this Society. Therefore the history of this subject is closely bound up with the history of this Society. Articles on the same subject have now become numerous. A new journal has appeared on balneology, and a department in that magnificent specimen of American journalism, the *Annual of the Universal Medical Sciences*, chronicles the advances in this therapeutic specialty. Indeed, a recent letter from Dr. Winternitz, Professor of Hydrotherapy in the University of Vienna, refers to the fact that more is now done in this country for hydrotherapy than in Germany, its birthplace. For this reason I venture to offer you some practical remarks on this subject. The chief, though not the only, aim of hydrotherapy is to stimulate or give tone to the nerve-centres. Since all vital energy emanates from the latter, since the proper performance of all the organic functions depends upon their activity, it is fair to deduce important therapeutic results from an agency which influences it so potently. The main question is, Does the application of water to the cutaneous surface stimulate the nerve-centres? That this is a trite physiological fact is daily observed in the effect of a dash of cold water in reviving a person under syncope. Here we have a brief shock to the sensory peripheral nerves, followed by reaction whose effect is transmitted to the central nervous system, and thence to the respiration, deepening it and the circulation, restoring the failing pulse; thus the temporarily dormant vital powers receive a stimulus whose appreciation must convince the most sceptical by its very simplicity.

At this time I do not propose to dwell upon the various modifications which change in the temperature of the water applied to the cutaneous surface may produce, nor the remarkable difference of effect resulting from the increase of the pressure under which it strikes the skin, nor the valuable results of changes in the duration of the procedure.[2] Suffice it to say that we have in the external use of water a therapeutic agent so flexible that it may be adapted to the most varying types and forms of disease. The following brief outlines of cases are presented in order to enable you to obtain a view of the practical application of hydrotherapy in some intractable chronic diseases, to demonstrate its flexibility, and to point out the methods of adapting it to varying conditions.

CASE I. *Intense Chlorosis.*—Miss H——, aged twenty, ill two years; under constant treatment by gynecologists in Harrisburg, Baltimore, and Philadelphia, was brought as a last resort to Dr. T. G. Thomas, to be placed in his sanitarium. Dr. Thomas discovered no uterine trouble, and referred her, on June 8, 1892, for hydriatic treatment, with a diagnosis of chlorosis of aggravated type. Local, medicinal, and institution treatment, iron, arsenic, diet, massage, and change of air, had been tried in vain. Although the patient was plump, a more pallid creature could not be imagined. Appetite was poor, bowels irregular, her sleep was disturbed, and she was subject to frequent (hysterical) fainting spells. The slightest exertion produced difficult breathing and rapid heart action. Menstrual flow was regular, but scant and very pale. Blood examined by Fleischl's hæmometer registered thirty-one per cent.

June 10th.—Preparatory treatment at the Hydriatric Institute by hot-air baths and spray douche, to educate the patient's reactive capacity, was ordered. Fainting in the hot-air bath, she was removed. A spray douche of two seconds at 64° F., with twenty pounds pressure, was rapidly passed over her in a sitting posture. She again fainted. Friction produced no reaction. On the following day a milder course was pursued. She was gently wrapped in a long-haired, woollen blanket for forty-five minutes. Parts of the body were then successively uncovered and splashed with water at 60° F., thrown with some force from the hollow hand of the attendant. This was followed by friction, and continued until the whole body had received the ablution and friction. The same treatment was continued on the 11th and 12th, when she fainted twice. This was repeated without fainting until June 16th. She was again placed in a hot-air bath (167° F.) with a cold compress around the head and given frequent sips of ice-water. The head not being subjected to the heat, the patient was enabled to breathe the cool air which permeated the room. When the cutaneous vessels became turgid she was seated in a tub containing eighteen inches of water at 100° F. and thoroughly rubbed for three minutes. This was followed by an ablution at 60° F., good friction, drying, and general massage for fifteen minutes. She fainted twice during these procedures. Reaction fair.

July 8th.—The last treatment had been continued, reducing temperature of the spray douche daily one degree; to-day she had an air-bath (160° F.) followed by spray-douche under thirty pounds pressure for five seconds, beginning at 80° and rapidly reduced to 50° F., followed by fifteen minutes' general massage. She reacted well and felt comfortable.

July 14th.—Same treatment has been continued. To-day she had a hot-air bath (175° F.) followed by rain bath, thirty seconds at 94° reduced to 69° F., then spray-douche, ten seconds at 79° to 54° F., and general massage. Reaction good.

July 30th.—This treatment has been continued until to-day, when she took a jet douche at 45° F. without flinching. Being absent in Long Branch, I wired to Dr. S. T. Armstrong to examine her for me. Dr. Armstrong reports: "Miss H—— looks quite well, eats and sleeps well, and is certainly improved since I last saw her. The comparison test indicates about one hundred per cent. hæmoglobin."

August 1st.—Miss H—— left for her home in Pennsylvania.

This case certainly illustrates, 1, the effect of the douche in improving the nutrition; 2, that hæmatosis may be enhanced by the stimulus conveyed from the periphery to the nerve-centres, and thus reflected upon the blood-making functions, as have been well shown by Winternitz, Thermes, and others; 3, that the most feebly reacting patient may, by perseverance and proper adaptation of the hydriatic procedures, become accustomed to

[1] Read before the Medical Society of the County of New York, January 23, 1893.

[2] See The Uses of Water in Modern Medicine, by Simon Baruch, M.D. Detroit: George S. Davis.

this treatment. The danger of shock from cold water is proven to be chimerical by this case. If this fragile and sensitive young woman could be accustomed to the douche by beginning with mild procedures, no chronic case that is not *in extremis* could fail to respond to it.

Case II. *Nervous Dyspepsia; Anæmia.*—Mrs. O——, aged twenty-eight, resident of Florida, consulted me, May 5, 1892, for "catarrh of the stomach." Because of agonizing pains after meals she has been living on mush and milk, and has had medical treatment for several years, with diminution, but not disappearance, of the pains. She is emaciated, her voice is feeble, she is depressed and hopeless. Her wan face and prematurely old appearance bear evidence of a life of constant physical suffering. There is not a particle of the hysteric element in this case. Ordered at 12.30 P.M. a full test meal at Delmonico's, which she reluctantly accepted, because of dreaded increase of pain. Returning to my office at 5.30 P.M., the stomach was washed out without difficulty, Mrs. O—— displaying marked patience. To her great surprise, my prediction that her dinner would be digested was verified, a little tomato-peeling being the only remnant visible.

The diagnosis of a gastric neurosis being thus confirmed, she was ordered a mixed diet, chiefly consisting of hot milk and stale bread and hominy for breakfast, adding eggs (soft boiled) later; same, with fish or oysters, for luncheon; and steamed rice and roast beef for dinner. Desserts and salads forbidden.

The general invigoration of the entire system being the chief element in this case, she was at once placed upon daily hydriatic measures as follows:

May 6th.—Hot-air bath at 169° F. for six minutes filled the cutaneous vessels of her pallid skin and produced free perspiration. This was followed by a tub-bath of water at 98° F. for five minutes, and a rain-bath of 95°, reduced to 90° F., for half a minute, at twenty pounds pressure, for the purpose of increasing cutaneous action. A tonic procedure by the spray-douche at 80° F. for five seconds, with friction, closed the first treatment and resulted in good reaction.

On the following day she remained in a hot-air bath at 164° F. only long enough to render the cutaneous vessels turgid to promote reaction from the rain-bath for thirty seconds at 90°, reduced to 80° F, and a spray-douche at 70° F. Reaction very fair.

May 11th.—Temperature of rain-bath was reduced to 75° and a jet-douche at 65° F. was added. Reaction good.

May 23d.—Same treatment, with jet-douche to back at 60° F.

May 25th.—Complained of sciatic pains on right side. The Scotch douche was applied to the lateral gluteal region for thirty seconds, followed by jet-douche of one second at 59° F.

May 31st.—On account of menstruation treatment has been omitted for six days. Sciatic pain is relieved. Treatment of May 11th resumed.

June 2d —Temperature of rain-bath reduced to 70°, and of jet-douche to 57° F.

June 12th.—Same treatment, except jet-douche lowered daily one degree, reaching to 48° F. Patient has been steadily improving in flesh and spirits, being free from pain until to-day. The addition of cauliflower to her diet reproduced pains. Stomach was now washed out and some mucus found in it. Temperature of jet-douche was raised to 60° F., as the patient was excited by it.

June 18th.—Jet-douche suspended; hot-air bath 180° F., followed for forty seconds by rain-bath of 75°, reduced to 65° F.; stomach washed out again.

June 20.—Pain returning, the constant current, 12 milliampères, was applied by a large flat sponge electrode over epigastric, and a small one over lumbar region

June 27th.—Temperature of baths having been higher, were now reduced, patient being again depressed. The jet douche was given at 50° F. for three seconds. Reaction good.

July 9th.—Electricity having been unavailing, and there being fermenting material found in the stomach, the Scotch douche has been applied to epigastric region for thirty seconds after the rain-bath, 70° to 45° F. daily, and followed by jet-douche at 50° F. for three seconds. Patient now feels sufficiently restored to go to Buffalo to her parents.

Under date of November 26, 1892, she writes that she has gained fifteen pounds in weight and is much stronger, has continued the diet prescribed, because, like most of these neurotics, she "feared her stomach was not equal to much of a change." Most of the time she is entirely free from pain; she has slight distress every now and then, but expresses the warmest gratitude for the help given.

This case is similar in many respects to the case of Dr. H——, reported in "The Uses of Water," vol. i., p. 85, and demonstrates the value of hydrotherapy in improving the nutrition and thus furnishing better blood to the stomach-nerves, which are calling for it through pain.

Case III. *Diabetes and Obesity.*—On March 2, 1892, I was consulted by Mrs. S——, wife of a prominent police official, aged sixty-three. She had been suffering from lassitude, loss of appetite, and depression of spirits for several months; had been relieved of muscular rheumatism by wet packs and massage a year ago.

Examination revealed six per cent. sugar by fermentation test. Sp. gr., 1.040; quantity in twenty-four hours, 81 ounces. She was languid and indisposed to exercise, weighing, without clothing, 253¼ pounds on March 21st. An antidiabetic diet was ordered, and systematic walking exercise. The former was rigidly adhered to for four weeks without effect; the latter could not be accomplished because walking two blocks "put her out of breath" and exhausted her. Acting upon the well-known physiological fact that next to the liver the skeletal muscles hold most glycogen, and that sugar is by exercise of these muscles best utilized for the benefit of the organism, I regard systematic exercise of quite as much importance as diet. I have the record of six cases in which these two, combined, entirely and permanently removed the sugar from the urine. A strict diet having failed in this case, it was important that some therapeutic method be adopted to enhance the patient's capacity for muscular exercise. It was determined to reduce her weight and invigorate the nervous system by a carefully regulated hot-air bath until free perspiration ensued, once a week, followed by the spray-douche at 90° F. for half a minute, and at 80° F. for ten seconds; this was succeeded by active massage. Five times a week she received a tonic hydriatic procedure, beginning on March 28th with the dry pack for half an hour to fill the cutaneous vessels, followed by a general ablution at 70° F. and good friction. Patient attended daily, coming from her home in West 152d Street to the Institute in a carriage, as she was unable to walk.

On April 15th she had lost six pounds, and felt able to walk six blocks twice a day.

April 22d.—Urine showed specific gravity 10.35; sugar, five and one-quarter per cent. Ordered wet pack forty-five minutes, sheet wrung out of water at 50° F., followed by half-bath ten minutes at 85° F. Sponge ablution on back at 70° F., with active friction in tub. Massage fifteen minutes. The object of this treatment was to increase tissuec-hange and improve the circulation in the muscular tissues. This was continued until June 6th, the jet-douche at 75° F. being added as a tonic and for contracting the muscles. The result of these procedures was ability to walk more every day until she was not fatigued by four miles per diem. The diet being rigidly adhered to, a rapid decrease of sugar was evident every week from the date of the first half-mile walks.

Since July 1st she has been entirely free from sugar until the present time; frequent analyses having been made until December 1, 1892. In this case the diet alone pursued for four weeks made no impression, but as soon as the patient was able to oxidize her sugar by

means of muscular exercise, improvement became pronounced. No medicinal agent could have accomplished this change in the nervous, muscular, and vascular structures in as brief a time, if at all. Of this I am convinced by other cases similarly treated.

Case IV. *Diabetes Uninfluenced by Diet and Hydrotherapy.*—Mrs. De B——, aged sixty-five, applied for treatment for a severe herpes zoster on the left part of back below the scapula. On the evening of April 4, 1890, I was hastily summoned, after I had treated her herpes on the preceding afternoon. She was absolutely comatose, without any reflexes, etc. Drawing some urine by catheter, I found no albumin, but decided evidence of sugar, this being its first discovery. Toward morning she became conscious spontaneously, and began to improve.

On the following evening she was seen in consultation by Dr. A. Loomis. She continued under treatment, chiefly dietetic, and codeia and constant current for severe neuralgic pains at former seat of herpes. Sugar has been almost constantly present in small quantities, one-half to one per cent. During the winter of 1892–93 she decided to undertake a thorough course of hydrotherapy, encouraged by the patient whose history is given above, and who lives near her. The same treatment had not the slightest effect on the urinary sugar. But she regarded herself as so much invigorated and capacitated for more work and exercise that she voluntarily takes the treatment twice a week as a tonic agent.

Case V. *Sexual Hypochondriasis.*—Mr. ——, aged forty-seven, was referred, on June 5, 1892, to the Institute by Dr. S. Weir Mitchell, of Philadelphia, with the following history, here abbreviated: Patient complains of impotence, and a sensation of water trickling down front of thighs. Habits good; had three children, all dead; two died at birth. Three years ago when his wife was absent, he first discovered the trickling sensation. On her return he found sexual desire present, but was incapable. Emission occurred, and still occurs in sleep. Had two strictures cut without relief. After being in the mountains a year ago, he had two successful connections, and again in November, 1891; none since; frequent emissions and firmer erections during sleep. These are rare now. Present state: Stout man, abdominal paunch; uro-genitals normal; cremaster reflex absent; paræsthesia along anterior crural nerve; electrical examination negative; sleeps well; appetite good; no sperm in urine.

Dr. De Schweinitz pronounces eyes normal. Dr. Mitchell regarded patient as suffering from some slight but distinct trouble of the lumbar or dorso-lumbar cord. Dread of sexual failure is probably emotional; full recovery of power is probably not to be looked for. Advises electricity (detailed), also douches, alternating warm and cold, to spinal column.

Treatment at Institute, June 5th.—The patient's peripheral circulation being feeble, skin flabby and inelastic, pulse compressible, and a general aspect of mental and physical depression being present, it was thought advisable to give him tonic treatment as follows: A hot air-bath, 170° F., for twelve minutes having warmed him up, a rain-bath of 100°, reduced to 80° F., during forty-five seconds, was given under thirty pounds pressure, and followed by the jet-douche at 70° F., for two seconds, under fifteen pounds pressure. General massage was given for fifteen minutes. Reaction was poor.

June 6th.—Hot-air bath, 178° F., ten minutes. Rain-bath, 95°, reduced to 70° F., during one minute, was followed by Scotch douche (alternating hot and cold stream) to spine. Reaction poor.

June 11th.—Same treatment was continued, reducing temperature of douche daily one or two degrees, and increasing pressure. Reaction is now good, and patient looks brighter. The perineal douche (jet) of 60° F., for one minute, is now added for psychic effect.

June 12th.—Patient dissatisfied; does not think he "can improve by having a little cold water sprinkled on him," and insists upon more active measures.

June 16th.—The psychrophore of Winternitz, a small rubber or skin bladder secured to a double-current, straight rectal tube attached to an irrigator, is applied for five minutes with water flowing at 45° F.

June 19th.—Patient looks brighter, but insists, without having any test, that his sexual power has not improved. He leaves for Chicago to-morrow, and tells me that without my knowledge he had been under local treatment by Dr. E. L. Keyes while he was under my care. Two other cases of sexual hypochondriasis, of a milder form, and in younger men, were successfully overcome by the treatment here outlined.

Case VI. *Sexual Neurasthenia.*—A man, aged twenty-five. In this case the tonic treatment by hot-air baths followed by rain-baths and jet-douches to spine, gradually lowered to 45° F., was positively efficient in establishing a satisfactory condition. This gentleman applied for treatment for general debility. He was not a sexual hypochondriac, because he incidentally mentioned that he had been married six weeks, and did not experience the feelings that he had anticipated from sexual congress, to which he had been an entire stranger before marriage. After two months' treatment he volunteered the statement that he was entirely satisfied with the result.

Case VII. *Angina Pectoris.*—Mr. D——, merchant, aged forty, of robust appearance, gives a history (September 24, 1892) of having suffered for several months from agonizing pains in the præcordial region whenever he attempted to exercise much. He was disabled from business and much depressed. Dr. Janeway, in consultation with Dr. Keune, his attendant, diagnosed angina pectoris; another consultant diagnosed aneurism of aorta. Rest was advised and the usual treatment. Mr. D—— presented a decidedly gouty diathesis, with high arterial tension, and urine loaded with lithates. He was put upon a non-meat diet, glonoin, and strychnia, etc. A wet pack for an hour was given every morning, water at 60° F., followed by rapid ablution at 50° F., and friction. A wet compress was worn all day around left half of chest, renewed hourly in water at 60° F. He almost invariably slept in the pack. After three months' treatment, during which the frequency and intensity of attacks diminished rapidly, never at any time reaching their previous character, he was allowed to take a trip to Chicago. On his return he was put on chopped beef, preceded by hot water, for breakfast and dinner; oysters and hot milk for luncheon. Compresses were discontinued; wet packs continued daily, followed by an affusion with water at 70° F.

January 21, 1893.—He reports himself as quite free from all pain; losing some flesh, but feeling well, although he has done more work than ever before in his life. He has passed through the ordeal of seeing his large factory burned down, and through the excitement and labor of reconstructing it in another locality. The soothing effect of the wet pack and its effect in promoting tissue change are well exemplified in this case.

Case VIII. *Incipient Phthisis.*—Mr. S——, from Kentucky, aged twenty-six, merchant, consulted me at Long Branch on July 29, 1892. Looks pale and emaciated, states that he has been losing flesh and coughing seven months, is constipated, has no appetite. Caught cold during a fire. No hereditary element; temperature, 101° F.; pulse, 120. Physical signs: Percussion over left supraclavicular space dull; respiratory murmur in left apex harsh; expiration prolonged. Ordered calomel, six grains, and absolute rest.

July 31st.—Feels better. Temperature, 99° F. Ordered to go to Institute for treatment. Here he was weighed (nude), one hundred and six and a half pounds, and received a hot-air bath until warm, to enhance his reactive powers; this was followed by a rain-bath of 95° F., reduced gradually to 80° F., for forty seconds, under ten pounds pressure, gradually increased; then spray-douche at fifteen pounds pressure, gradually increased to

thirty pounds, for four seconds at 70° F. This was repeated daily. He reported again at Long Branch ten days later, looking better, appetite improved, and with a gain of one pound and a half. He says a friend had advised him to have his sputum examined, and that the latter was found to contain bacilli. He was also urged to see Dr. E. G. Janeway, who after prolonged examination pronounced him phthisical, advised him to leave the city at once and ordered him to take creosote. As he was improving under hydrotherapy, I regarded his departure with disfavor and advised continuance.

September 8th.—The hot-air bath, followed by rain-bath, 80° to 70° F., and spray-douche, 70° to 40° F., have been continued, until to-day patient weighs one hundred and fourteen pounds, a gain of seven and a half pounds in five weeks; appetite is excellent; cough still troublesome; is very hoarse; temperature, 101° F. Benzoin inhalation and one-fourth of a grain codeia every four hours improved cough in two days, during which time hydriatic treatment had been discontinued. It was now resumed.

September 12th.—Temperature is 99° F.; cough reduced to a minimum; appetite excellent. Weight, one hundred and thirteen and a half pounds. Has been taking six drops creosote, t.i.d., which sickens him and is discontinued. Ordered maltine with peptones in milk t.i.d.

September 19th.—Hot-air bath (170° F.) three minutes, rain bath 80°, reduced to 64° F., one minute, from which he reacted well. Cough troublesome, a spirometer test shows 190° before and 260° F. after treament, which is 20° F. above the average for his height.

September 20th.—Dr. J. S. Ely reports tubercle bacilli in small numbers.

December 30th.—With occasional interruptions and loss of weight, patient has progressed well, and to-day weighs 121½ pounds; looks well, coughs but little, normal temperature, and is anxious to go home. Dr. Freudenthal, who treats his throat, writes, under date of January 12, 1893, after detailing from his case records the physical signs he found on July 27, and again on November 11, 1892: "Patient looks and feels much better, and has gained 10 pounds, in weight. Ulceration on the ligamentum glosso epiglotticum and of the vocal cords have healed under lactic acid and menthol oil, twenty per cent. Although I am not as optimistic as you are regarding water treatment, I must acknowledge that the improvement in this case is remarkable."

January 21.—Patient is now almost free from cough and has good appetite, weighs 122½ pounds (a gain of 16 pounds, and five pounds more than he ever did in health). Dr. Van Giesen reports that no tubercle bacilli could be found after examining seven slides.

Remarks.—There having been no change made in the patient's diet, mode of life, and treatment, this case is a clear illustration of the utility of a judicious hydrotherapy in improving nutrition in cases that usually thwart us. Clinical evidence of its value in phthisis is accumulating so rapidly that I need only refer here to a few of the cases I reported to the State Medical Society last February. One of these, aged thirty-three, of a year and a half's duration, beginning with pulmonary hemorrhage, gained 26 pounds in three months, and coughed so little that no specimen of sputum could be furnished; another, thirty-six years of age, ill two years and a half, beginning with hemorrhages, gained 21 pounds and lost all bacilli from sputum and returned to work; another, aged thirty-one, ill one year, with repeated hemorrhage, night-sweats, etc., was discharged after one year's treatment with 20 pounds gain of weight, without bacilli, with slight physical signs, and able to work.[1]

Such stubborn facts should make us pause ere we condemn these sufferers to exile from home. A more methodical management, as indicated in the above-quoted essay, offers a reasonable prospect of success for home treatment. Witness the case of H. B——(p. 383), who after emigrating to Minnesota and improving there for six years, failed, and came to this city with a cavity, in the most desperate general condition, and was sent home so much improved that he was able to attend to business.

Clinical proof abounds that phthisis offers, next to nervous disease, the most fruitful field for hydrotherapy.

Case IX. *Advanced Bright's Disease; Remarkable Results from the Hot Blanket Pack.*—Mr. A——, aged sixty, a foreman at a lead-trap factory, came under my care, by request of his benevolent employer, on May 4, 1891. I had attended him several years ago for lead colic and severe headaches, from which he recovered. I now found pronounced swelling of feet and ankles, breathlessness on exertion, morning nausea, headache, double vision, and vertigo; urine showed a large proportion of albumin, and abundance of hyaline casts; specific gravity, 1.020.

Patient received ten grains of calomel, was put on bitartrate potass, lemonade, and was ordered one minim of one per cent. solution glonoin every three hours until flushed. He also received hot blanket packs of one hour, morning and evening. The quantity of urine having been reduced to twenty-two ounces, the treatment continued active until May 28th. Dr. Edward S. Peck examined his vision to-day and diagnosed homonymous diplopia, amblyopia, and albuminuric retinitis. Dr. Peck examined urine on the 29th, and found it to "contain albumin in large reduction." There being some improvement in the symptoms, the same medicinal and dietetic treatment was continued.

The hot blanket packs were now given once a day. They were like the first, always given by means of a blanket thoroughly wrung out of hot water, laid upon another blanket. Patient was snugly tucked into the hot blanket and afterward covered by other blankets. He remained in this one hour or more, until he perspired very freely. Successive parts of the body were now gradually uncovered and thoroughly dried. General friction closed the procedure.

June 30th.—Examination of urine made from time to time revealed gradual improvement in quantity and constituents. He went to the country on July 1, 1891. On September 9th he called at my office. His urine presented but a trace of albumin, he was free from all unpleasant symptoms, was strong, and had resumed his duties at the factory for the past week.

October 4th.—I could find no trace of albumin or casts in his urine.

He worked without interruption during the entire winter until August, 1892, when he was obliged to discontinue by a severe diarrhœa, for which I was not called. He went to Hackensack, N. J., and was there attacked, on August 16th, by apoplexy and hemiplegia, from which he died, after remaining unconscious six days.

Dr. St. John, his attendant, writes that prior to this illness he had examined the urine, finding no casts and but a small percentage of albumin. There was no œdema.

This case illustrates the value of the hot pack in restoring the failing function of the kidney. It is to be regretted that the patient did not remain under observation. These points, however, cannot be disputed: that he was utterly disabled by pronounced uræmia and albuminuric retinitis; that he recovered from these, so as to work steadily for a whole year. His work demanded precision and good sight, both of which he possessed during this period. Dr. William McLaury, who attended other members of the family, saw him during and after the illness.

Cases like this should give us confidence in the value of hydrotherapy in milder cases of Bright's disease. In the Montefiore Home such cases are not infrequent. In the report for 1891, Drs. Ettinger and Rosenthal say: "Two cases of chronic Bright's disease owe marked improvement to the systematic application of hydrotherapy. Both had been treated for several months elsewhere, without benefit. Both suffered from extensive dropsy of abdomen and legs. Eight quarts of fluid were removed

[1] Transactions of the New York State Medical Society, 1892, p. 382.

from one of these on the day of admission, and the other had been repeatedly tapped. The dropsy has progressively disappeared, until now it is extirely gone in both cases."

Case X. *Subacute Nephritis; Intense Catarrhal Jaundice.*—Mrs. S—— consulted me on June 29, 1892, being pregnant eight months. Symptoms: Albumin and granular casts in urine indicated nephritis of pregnancy. Two days later she was attacked by convulsions, during which she was delivered of a living child, which has continued to thrive. She remained comatose twenty-four hours, the urine being reduced to six ounces. Calomel, hot blanket pack, and nitro glycerine "unlocked" the kidneys. The urine remained albuminous and scant for several weeks. Her recovery has been slow but steady, under a non-meat diet, digitalis, nitro-glycerine, etc. Urine was still albuminous when I was compelled to leave her on September 5th. She was now kindly cared for by Dr. A. H. Smith, who sent her to me on September 26th, with the following (here abbreviated) history:

"For some time after you left Mrs. S—— did very well. The urine was abundant and the amount of albumin very small. I allowed her meat once a day. Appetite improved and kidneys remained satisfactory until her menstrual period, when there was an abrupt fall in the amount of the secretion to thirty ounces or less, with increase of albumin to five or six per cent. I then put her back on digitalis and added potassium acetate. This failed to increase the urine, and the hands and feet became a little swollen. I then ordered nitro-glycerine, and in twenty-four hours the amount was doubled. The specific gravity kept about 1 015 to 1.020; diet mostly milk. About a week ago, when the quantity of urine was smallest, she developed an intense itching of the surface, without any eruption. Increase of urine was not followed by improvement in this respect.

"It appears to me to be a case well adapted for hydrotherapy, and I am glad she is under your observation for this reason especially. The itching is very distressing. Bicarbonate of soda has little effect. Hyoscyamin gave her sleep. I sincerely hope you will be able to do something for her relief," etc.

Having returned to the city on September 27th, I found Mrs. S—— in a most distressing condition from constant itching of the entire surface; her eyes and skin had a yellowish tinge; bowels constipated, stools clay-colored; no appetite; urine thirty to thirty-six ounces daily, by careful measurement, and decidedly albuminous. All sorts of local applications failed, except a warm bran-bath, the success of which was temporary. She was now ordered a daily wet pack for three quarters of an hour; sheet wrung out of water at 70° F., reduced daily two degrees, followed by rapid ablution with water at 60° F., reduced daily one degree; also an enema of a quart and a half of water every day at 80° F., reduced daily five degrees until 60° F. was reached; Carlsbad salts twice a week, and a non meat diet. She passed twelve ounces of urine during the first four hours after the first pack. It continued to increase daily until the quantity reached far beyond the normal. This treatment was continued until November 1st. The last albuminous urine (a trace) is recorded for October 11th, at which time a few granular casts were still present.

December 27th.—Since that time eight specimens have been examined, all of which are entirely free from abnormal elements. Patient has gradually improved, with the exception of three days of intense colic, which I attributed to gall-stones. These were carefully searched for and found on November 26th, since which time the pain ceased and the skin cleared up entirely.

For two weeks she had hot-air baths at the Hydriatric Institute, followed by the rain-bath at 95° F., reduced to 80° for twenty seconds, and the jet-douche at 70° F. for two seconds, with massage. This tonic procedure improved her appetite. She is now taking two ounces of olive-oil twice a day in sarsaparilla syrup; and is allowed white meat three times a week, and beef once a week.

In this case the action of the wet pack as a stimulant to cutaneous action, which relieves the kidneys of work, was potent. Kussmaul, Friedrich Hoffman, and others have pointed out the superiority of the cold pack over the hot in subacute cases of nephritis. Krull's injections have so frequently proven themselves the most efficient remedial agents in catarrhal jaundice that the value of this hydriatric procedure need not here be dwelt upon. Dr. Smith's prediction that this case required hydrotherapy proved correct.

January 15th.—Patient has been discharged for several weeks, with an allowance of meat every other day. She is perfectly well. Urine examined to-day is found normal.

Case XI. *Epilepsy and Hysteria.*—A. F——, aged fifteen, was brought to the Hydriatric Institute, July 19, 1892, by his father, who says on March 31, 1892, on the day of his daughter's burial, the boy fainted. Ten days later he fainted in school, and again two days later. Dr. S. P. Cahen was called and investigated the case at school, coming to the conclusion that it was a form of epilepsy. The boy was kept from school and put on bromide potassium. The attacks becoming more frequent, Dr. George W. Jacoby was called in consultation; the same treatment was continued. He continued to have attacks every day, and very often twice a day, lasting from five to ten minutes. At first he lay unconscious, without any movement whatever, then the attacks became violent, frequently requiring several men to hold him down and prevent him from doing himself bodily harm. Dr. Jacoby was again called in consultation and made an unfavorable prognosis. Several neighboring physicians, who had been called during the attacks, gave him hypodermics of morphine. Patient also has received electrical treatment from Dr. Cahen.

Status Presens.—Face pale, covered with acne; eyes restless; hand tremulous; gait unsteady; appetite fair but capricious; gastric oppression after meals; bowels constipated; patient appears to be brominized.

Treatment.—Resorcin, three grains in one-half pint of hot water, an hour before lunch and dinner. He was ordered to be at once well scrubbed with soap and water. This was followed by a wet pack, sheet wrung out of water at 70° F., reduced daily two degrees. This to be followed by a rain-bath, at 90° F., twenty-five pounds pressure, gradually reduced during thirty seconds to 75° F.

August 20th.—This treatment had been used daily, the temperature of the bath being reduced two degrees every day. He had a slight attack five days after treatment was begun; none since. He was ordered to Long Branch to take surf-baths

September 29th.—Patient has called on me several times, reporting steady improvement. He is discharged cured.

January 1, 1893.—Up to this writing no further attacks have appeared.

Besides these there were a number of cases of chronic rheumatism, neurasthenia, bronchitis, asthma, and sciatica sent to the Institute for treatment by Drs. Starr, Dana, George Jacoby, Sachs, Lezynsky, Walton, Teschner, Pritchard, Willy Meyer, Allen, Schceney, Lincoln, Offenbach, Sayre, and others, the results of which will doubtless be reported by some of these gentlemen.

If the few clinical histories here offered shall induce practitioners to utilize water more frequently as one of their remedies, the writer will be content In his propaganda for hydrotherapy he has, in some quarters, been charged with unwarranted enthusiasm. If a conscientious proving of all remedial agents in vogue and proposed during an active general practice of thirty years entitles a man to an opinion on therapeutics, I would reiterate with emphasis the conclusions given in Hare's "System of Practical Therapeutics." To sum up the aims, capabilities, and results of hydrotherapy, it may be said: 1. We possess in this method a valuable auxiliary to methodical treatment of many, though not all,

acute and chronic maladies. 2. In many chronic diseases it has proved so successful after failure of medicinal remedies that no case should be yielded up as hopeless until hydrotherapy in some form has been tried. My observations at the Montefiore Home, which receives only incurable cases, demonstrates this fact.

Domestic treatment will suffice in most cases, but if these fail a methodical treatment under an expert hydrotherapeutist may be of advantage to the patient. The best consultants in Germany, Italy, and France, men like Leyden, Charcot, Nothnagel, and Erb, send their patients to these institutions, with their diagnosis and general suggestions, rather than with specific directions. Finally, so much depends upon the reactive capacity of each individual that only systematic observation can determine the most useful procedure in each case.

THE MANAGEMENT OF LABOR.

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The management of labor plays such an important part in the routine life of every general practitioner, so many of its details are only practised in lying-in hospitals and by specialists, that I feel justified to again discuss this well-worn subject, and I hope that some of the points brought out may be new and profitable.

When we are called upon to attend a confinement case it is desirable that we should inform ourselves about a number of details, and proceed in the examination of the woman in a systematic manner. For this purpose lying-in-hospitals provide printed history blanks, which the attending physician fills out, a practice which might profitably be imitated by the general practitioner. In this paper I shall briefly describe the methods employed in the Royal Hospital in Dresden, which I have adopted in my practice, but shall omit those points which only tend to collect statistical data. It is necessary to know the age of our patient, as it is well known how unfavorable the prognosis is in very young (fifteen to eighteen) and old primipara (thirty to forty-five), compared with normal age. Labor is apt to be protracted. Lacerations of the soft parts, due to their rigidity, are not infrequent, and operative interference for various causes is often called for. Information regarding the family history of the patient is necessary. If several of her friends have died from phthisis, or the mother and sisters of the patient had difficult confinements, a careful inspection of the lungs and pelvis has to be made. A pelvic deformity is often found throughout a whole family, and the hereditary disposition to tubercular diseases cannot be denied. Inquiries into the diseases of childhood should never be omitted, especially as to rachitis. The patients always know when they have learned to walk, and if we receive the answer, "My mother told me that I learned to walk when I was three years old," or "I learned to walk when I was one year old, but forgot it again," rachitic traces in the misshapen bones and slight curvature in the lower extremities will generally be found; the most careful pelvic measurements are then in order. Should the patient be a multipara, we naturally inquire into the history of her previous confinements. If former pregnancies were terminated by craniotomy or other operations, we must be on the lookout. That puerperal infection acquired in preceding confinements may leave latent foci of bacteria in the pelvic organs, in the form of old exudations, pyosalpinx, or abscesses, which, through the act of labor, are again awakened into action, should be known to everyone. It may sometimes ease our mind and save our reputation. It is very important to be correctly informed about the condition of the heart and lungs, especially if chloroform has to be given. The urine must also be examined. If it is loaded with albumin an eclamptic attack will not find us unprepared. Observation of a large number of cases has also demonstrated the fact that post-partum hemorrhage is more frequent in cases of albuminuria. The pulse and temperature of the patient should be noted, and if they are abnormal the family ought to be informed about it. Not infrequently puerperal infection is present before the birth of the child, and if we cannot positively state that abnormalities of pulse and temperature have existed before we took charge of the case, undeserved criticism may be our lot. For the same reason we inquire whether vaginal examinations have been made by other persons, or by the patient herself. The importance of this question is best illustrated by the following three instances: Three cases of puerperal infection are reported from the Lying-in Hospital in Leipzig. These cases were examined by one nurse only, at intervals from three to eight hours. Investigation has shown that the rigid antiseptic rules of that institution were thoroughly carried out by this nurse. The second case died from puerperal septicæmia, eight days post partum, the other two women made a slow recovery from the same malady. It was found that the first case admitted was suffering from a purulent conjunctivitis, and that she had infected her genital tract with her own fingers.

Another interesting case occurred in the Dresden Maternity Hospital. A woman who had been in the hospital for some time awaiting her accouchement, was admitted to the confinement-room, where she gave birth to a living child without a single vaginal examination having been made; only the vulva was thoroughly disinfected. A few days later she was seized with puerperal septicæmia and died. Upon investigating the case it was found that another patient had made several vaginal examinations before she entered the confinement-ward, to inform her about her condition. There was hardly any doubt but that the infection originated from the vaginal examination. A third case happened in my own practice. I was called to attend a primipara who was in labor two days. I made two vaginal examinations, thoroughly disinfecting myself each time, and finally, when the os was fully dilated, I put on the forceps and delivered a living child without much difficulty. A small laceration of the perineum was united by sutures. Thorough antiseptic precautions were observed. The instruments were boiled and then kept in carbolic acid solution. Two days later the woman died under symptoms of septic infection. Inquiring into the case, I found that the midwife who was engaged in the case had made frequent vaginal examinations and given a vaginal douche with an old rectal syringe; she also came direct from a case of abortion, in which the fœtus was decomposed.

I next wish to draw attention to the pelvis. It is a deplorable fact that pelvic measurements are but seldom made, yes, what is worst, a large number of physicians are unable to make them. The diagnosis of a pelvic contraction is not made, as it ought to be, before or at the beginning of labor by measuring the pelvis, but not infrequently in the following manner: The doctor sits and watches his case, after he has made the diagnosis of the presentation. If he is a conservative man, he waits quietly a good while, and then finding that labor does not advance, he puts on the forceps. Vigorous traction does not effect delivery, he therefore sends for a friend, who is also unsuccessful. Now, they conclude that the pelvis is contracted, and that the case is possibly a proper one for Cæsarean section. A specialist is called in, who measures the pelvis and immediately diagnoses a degree of contraction which precludes the possibility of delivering a living child *per vias naturales*, and who decides that only craniotomy or Cæsarean section can terminate labor. If the child is dead the problem is not difficult to solve, but if it is alive they have to face a serious question. Shall they undertake the Cæsarean section in a woman exhausted from prolonged labor and operations, with soft parts bruised and probably already infected, or shall they sacrifice the child in the interest of the mother? The answer will be according to what class of doctors

our friends belong to. The question of craniotomy upon the living child divides the medical profession into two groups. One group, decidedly in the minority, never perform a craniotomy upon the living child, no matter what the condition of the mother. They either sit and wait for the child to die, or they perform a Cæsarean section. The second group prefer Cæsarean section and are ardent advocates of this operation if the mother is in a favorable condition, but they do not hesitate to perforate the living child, if a Cæsarean section gives an unfavorable prognosis from the outset. They do not underestimate the value of the child's life, but in their mind the mother, who already occupies a position in life and is a known quantity, has the first claim. Those interested in the subject, craniotomy vs. Cæsarean section, will find a paper written by me in the September number of the *American Journal of Obstetrics*.

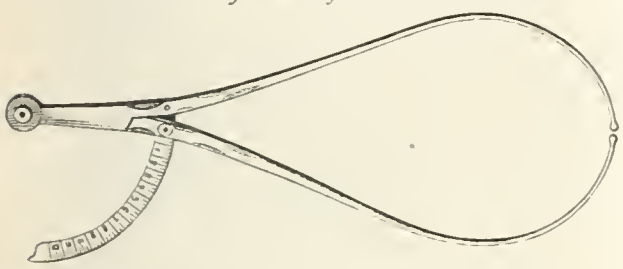

Fig. 1.—Pelvimeter of E. Martin.

Measurements of the Pelvis.—The pelvimeter which I use is the one designed by E. Martin (Fig. 1). It is a simple instrument, and can be easily taken apart. But any other pelvimeter will answer. The following measurements are generally taken:

1. The distance between the anterior superior spines of the ileum (spinæ), 26 ctm. = 10″. 2. The distance between the widest part of the cristæ ilii. The points of the instrument are placed upon the middle lip of the crest (cristæ), 28 ctm.= 11″. 3. The third and most important measurement is the diameter of Baudelocque (conjugata externa), from the spinous process of the last lumbar vertebræ to the upper border of the symphisis pubis. To measure this diameter the patient has to be placed upon her side. To find the spinous process, locate the posterior superior spine of the ileum over which a depression is generally observed; about one inch above the middle of a

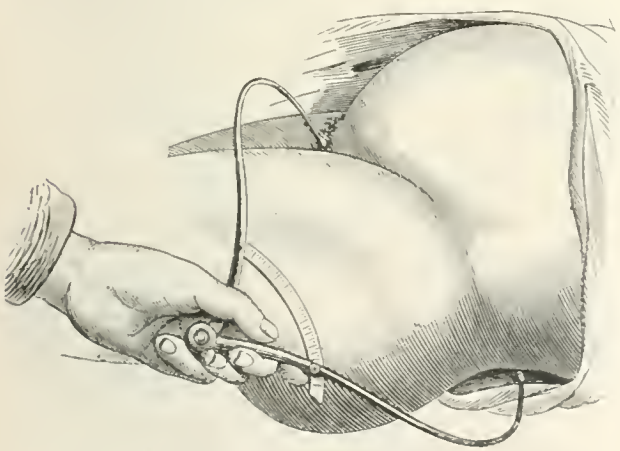

Fig. 2.—Measurement of the Conjugata Externa.

line drawn from one spine to the other, the spinous process is found. The distance in the normal pelvis is 19.5 ctm. =7.5″. The accompanying drawing (Fig. 2) will best illustrate the method of measuring the conjugata externa.

These external measurements do not give the diameters of the true pelvis, deformities of which are alone of consequence in the parturient act; but a knowledge of the external measurements is useful in regard to the diagnosis of deformities, as extensive external deviations generally imply internal abnormalities. When examining a pelvis we should notice also, whether the symphysis pubis projects, as it indicates a small costean pelvis. In a rachitic pelvis the distance between the anterior superior spines is generally as great or even greater than the distance of the crests. The discussion of the internal pelvis measurements I will postpone until I enter upon the subject of vaginal examinations.

The mammæ and external genitals should be subjected to a careful inspection. We examine the nipple and see whether it projects sufficient to permit the child to nurse, and if the glandular structure is well developed. The abdomen of the patient should be examined, otherwise an abdominal hernia or the presence of hydramion may be overlooked. The vulva may be the seat of varicose veins or œdema, both of which, but especially the former, can cause serious complications.

As the day on which conception has taken place is generally unknown, we use the time when fœtal movements were first noticed and the last menstruation as fixed points to find out the period of gestation. Fœtal movements or quickening are first felt about four and a half months after conception. The method to determine the date of gestation from the last menstruation is well known. Count three months back from the last day of the last menstruation, then add seven days; this allows two hundred and eighty days for pregnancy, and is approximately correct. The size of the uterine tumor will also aid in determining the various periods of pregnancy.

In the larger number of cases abdominal palpation suffices to make a correct diagnosis of the presentation. I

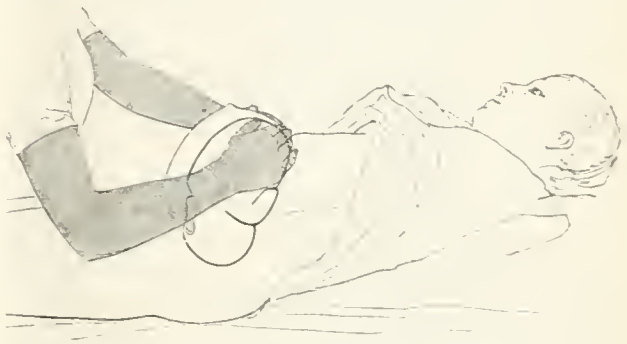

Fig. 3.—Abdominal Palpation. First Method (After Credé and Leopold).

employ abdominal palpation to determine the position of the fœtus-in-utero, by the method taught by my esteemed teacher, Professor Leopold. He uses four methods. Gentleness should always be preserved, as an undue amount of pressure results in exciting uterine contractions; during these the examination must be interrupted for the time being.

The woman lies upon her back, with her limbs extended; the abdomen is exposed from the symphysis to the ensiform cartilage.

First.—The physician sits at the side of the woman, places both hands, slightly flexed so as to correspond to the convex surface of the uterus, upon the abdomen, and gradually carries them upward toward the fundus (Fig. 3); this reached, the failure of resistance is noticed. This teaches us the size of the uterus, time of gestation, whether the child is in the longitudinal or transverse position, and whether the head or breech occupy the fundus.

Second.—The hands are placed at each side of the uterus (Fig. 4); then under one hand we feel the arched back, under the other the several parts corresponding in position to the abdominal surface of the fœtus. When the abdominal walls are thin, the different parts can be felt with surprising clearness.

Third.—The fingers of the right or left hand are spread as much as possible, and the presenting part is seized between thumb and middle finger. If it is round and hard it can only be the head, which can be grasped like a cannon-ball and moved if above the pelvis (Fig. 5). If no presenting part can be felt, then we must look for the head on either side. If the outlines of the present-

ing head or breech are indistinct, then we are to be suspicious of placenta prævia. This third method is very valuable in all cases where the presenting part is yet in the entrance of the pelvis; a practised examiner can also locate, through this alone, where the occiput and where the chin point.

Fourth.—As labor is more advanced the fourth step will be this: The physician takes his place at the bedside, turning the back toward the patient's face. The hands are placed in such a manner upon the patient's abdomen that the fingers are directed toward the cervix (Fig. 6). During the intervals of pain the hands are pressed deep

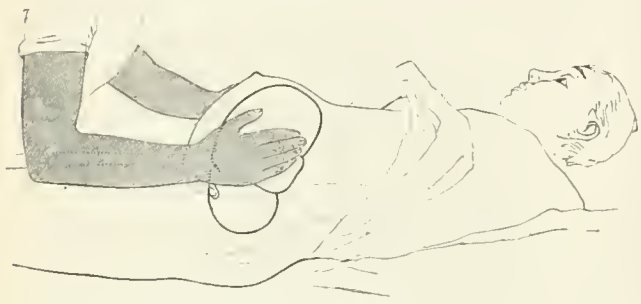

Fig. 4.—Abdominal Palpation. Second Method (After Credé and Leopold).

into the pelvis and the presenting part is grasped. The head is again recognized by its peculiarities.

The presence of small parts in close proximity to the abdominal wall indicates that the back of the child is directed toward the sacrum. Descent of the fœtus is often prevented by abnormalities of the pelvis; in these cases the contraction ring can be felt by abdominal palpation, and thus the danger of rupture of the uterus by timely means can be averted

Auscultation should always be associated with abdominal palpation to verify our diagnosis. With heart-sounds to the left in maximum intensity, the back of the child is directed to the left. When the back is posterior, the heart-sounds are loudest in the axillary line, and in breech presentations they are heard at a higher level.' All these points of information can be gotten by the comparatively inexperienced after but little practice, and its conscientious practice will make a vaginal examination in the majority of cases unnecessary.

Fig. 5.—Abdominal Palpation. Third Method (After Credé and Leopold).

Before a vaginal examination is made the external genitals must be thoroughly cleaned with soap and water, and after this washed with Sol. Hg. Cl_2, 1 to 4,000. We also have to disinfect our own hands. To dip them into carbolic acid solution, or wash them with carbolized or tar soap, is not practising antisepsis. After they are thoroughly disinfected they must not come in contact with any septic matter. To clean and disinfect the hands and then scratch the head, is a pernicious practice, which must be avoided. For lubricating the fingers and instruments I use boro-glycerine; it is aseptic, clean, and odorless. When making a vaginal examination, the following points should be noticed:

The condition of the vagina, its dimensions, whether it is dry or bathed with secretions. If the vagina feels rough, and at the same time secretes greenish matter, we probably have to deal with a colpitis granulosa, an inflammatory condition of the vagina, usually caused by gonorrhœa. This point is of importance in guarding against ophthalmia neonatorum; it has also been found that puerperal infection is more frequent in these cases. Next we notice whether the cervical portion of the uterus projects into the vagina, or if its obliteration has taken place; also feel for the os, and notice its degree of dilatation, the condition of the margins, whether they are hard, rigid, or dilatable. Examine the membranes, whether

Fig. 6.—Abdominal Palpation. Fourth Method (After Credé and Leopold).

they are entire or ruptured. We next feel for the presenting part, whether it has entered the pelvis or is above the brim. If it is the head, notice also the sutures and fontanelles; this may be difficult if a large caput succedaneum is present. Prolapse of the cord and placenta prævia should be borne in mind. While making a vaginal exploration, we should also in a routine way take notice of the condition of the pelvis, and observe whether the rami pubis form the wide angle so peculiar to the normal female pelvis. Palpation of the linea innominata will give an idea of the transverse and oblique diameters of the pelvis; and finally we measure the conjugata diagonalis. To do this, the tip of the index or middle finger is placed against the promontory, and with the free hand the distance from that point to the symphysis is marked (Fig. 7).

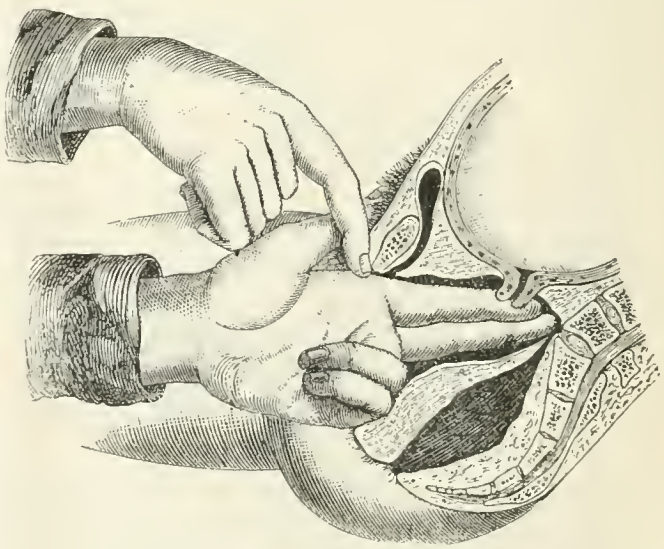

Fig. 7.—The Measuring of the Conjugata Diagonalis.

The distance in the normal pelvis is 12.5 ctm. = 5 inches; deducting from this 2 ctm. or $\frac{3}{4}$ inches, and the measurement of the true conjugata is known. To reach the promontory the woman must be placed in the dorsal position, with raised hips, so that the elbow can be depressed and the perineum pushed backward with the examining finger.

A few words regarding the uses of chloroform in obstetrics. In natural labor, chloroform should not be administered, except during some of the severe pains of the second stage. At such a time there is no objection to its use; it alleviates the severe suffering, and often aids in avoiding a threatened rupture of the perineum. Its administration should not be pushed to the surgical degree, only deep enough to take the edge off the pains. In tedious labor, due to a rigid and undilatable os, this drug is often of great service in producing rapid relaxation of the soft parts. In operative cases, no matter of what nature, chloroform should always be administered. The simplest forceps operation may be difficult if attempted without chloroform. Accidents from the inhalation of chloroform are extremely rare in obstetrical practice, the presence of pain counteracting its depressing effects. Yet in case of heart trouble we had better be careful. A good plan is to commence with chloroform, and later substitute ether. In this country, where ether is considered to be a safer anæsthetic, we are in the habit of employing ether in all obstetrical operations, the performance of which occupies a longer time, while on the Continent chloroform is universally used. Chloroform is a valuable drug in cases of eclampsia; it diminishes or entirely obliterates the peripheral nervous irritation, and thus indirectly cuts short the eclamptic attacks. It is not my object now to discuss the treatment of eclampsia, but I wish to say, because it is conclusively proved, that the emptying of the uterus is the best therapeutic measure; we should, while the patient is deeply under the influence

Fig. 8.—The Management of the Perineum. (After Crede and Leopold.)

of chloroform, effect delivery as rapidly as possible. In other words, chloroform as a means to hasten the emptying of the uterus is excellent; as a therapeutic agent in itself its value is questionable.

When the head passes the vulva, the perineum claims our attention. Upon the correct management of this stage of labor, depends whether we will have many or few lacerations of this important structure. The head should gradually dilate the perineum, and not be allowed to emerge during the acme of a pain, and it should pass the vulva by its shortest diameters.

The methods of managing the perineum are many, the two best ones are the following: The patient is placed upon her side, at the edge of the bed, with a hair pillow between the drawn-up knees. The thumb of either hand is placed upon one side of the vulva, the other finger against the opposite labium. The perineum rests in the palm of the hand. During a pain, this hand pushes the perineum from behind forward, thus relaxing it, while the fingers of the other hand, which are placed against the projecting occiput, prevent the head from being too rapidly born. (Fig. 8.)

The second method, which is more simple, but equally good if not better, leaves the perineum to take care of itself, and endeavors to let the smallest diameter of the head to gradually pass the vulva. With the left hand separate the labia, while the right hand pushes the occiput firmly under the pubis, and at the same time only allowing its gradual emersion. I do not like the method, in which the finger has to be inserted into the rectum, and the perineum is hooked forward and pushed over the head. The mucous membrane of the bowel may be injured, and there is always danger of causing infection, should we be obliged to go into the vagina or uterus. The very infectious nature of the intestinal contents is well known, they simply teem with bacteria.

As soon as the head passes through the vulva we feel whether the cord is coiled around the child; if so the cord must be loosened. A premature separation of the placenta or inversion of the uterus may otherwise be the

Fig. 9.—Tamponing of the Uterus with Iodoform Gauze. (After Dührsen.)

result. The uterus must be carefully watched to guard against post-partum hemorrhage, but the practice of rubbing and massaging it continuously, to keep it always hard and firmly contracted, is a pernicious one. Alternating relaxation and contraction is necessary to separate the placenta, and continues during the whole process of involution.

Before expressing the placenta we must be prepared to meet a possible post-partum hemorrhage. Some ergot and a hot and cold uterine douche should be in readiness. Massage of the uterus and the giving of either douche is sufficient in the majority of cases to arrest the bleeding. If the uterus should not contract, it is better not to waste time with anything else, but proceed at once to tampon the uterus with iodoform gauze. It is safe and very effective. The anterior and posterior lips of the cervix are seized with a pair of bullet or Volsellum forceps, and the uterus drawn down to the introitus vaginæ (Fig. 9); then the cavity is packed with a long strip of iodoform gauze, while we feel with the other hand whether we reach the fundus (Fig. 10); otherwise we might not tampon the uterine cavity, and an internal hemorrhage may still continue. A long pair of dressing-forceps are a necessary instrument for this operation.

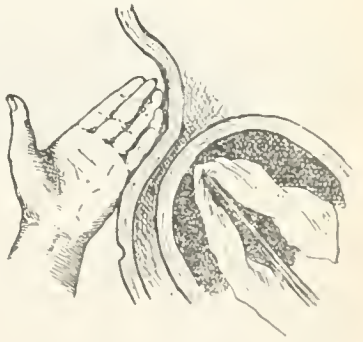

Fig. 10.—Tamponing of the Uterus with Iodoform Gauze. (After Dührsen.)

The placenta must be carefully expressed by the method of Credé, which is so universally known that its discussion may be omitted. There is one point to which I wish to draw attention (Fig. 11). The uterus sometimes expels the placenta into the lower uterine segment of vagina, where it remains. In these cases the placenta cannot be expelled by grasping the fundus, but if we press with the finger-tips just above the symphysis, the placenta will generally slide out of the vagina. After the placenta is born and examined, we must inspect the perineum and see whether there are any lacerations, and if so, sew them up immediately. The parts, owing to the pressure to which they were subjected, are not very sensitive, and the few sutures will hardly cause any pain. By uniting

the raw edges, we will save the woman much future suffering, as the most frequent cause of prolapse of the vagina and uterus are lacerations of the perineum. We need not be afraid to own up a torn perineum. Olshausen, who is known to be an expert obstetrician, writes that lacerations of the perineum are unavoidable in about fifteen per cent. of all primaparæ, and other authors give even larger figures. The external genitals of the woman thoroughly cleaned and contraction of the uterus being assured, it is customary to put on the abdominal binder.

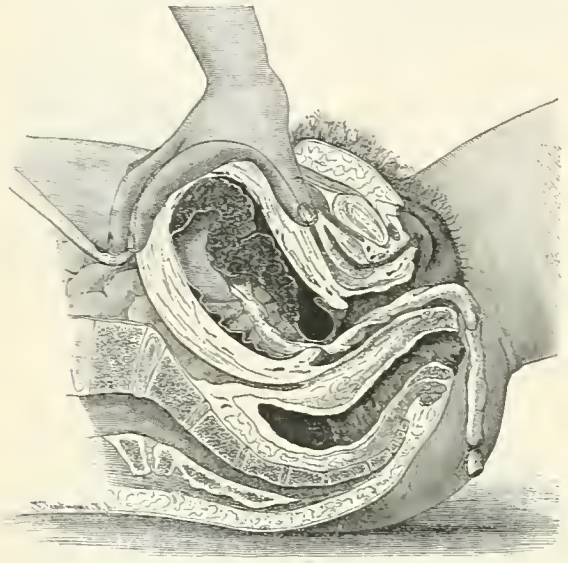

FIG. 11.—Expressing the Placenta. (After Credé and Leopold.)

In Europe the binder is but seldom used, but there are no objections to its application. It gives support to the lax abdominal walls, and diminishes the sensation of emptiness. The best binder I know of is used in the Sloane Maternity Hospital, where they apply also a breast binder. It prevents the hanging down of the breast, so often a cause of painful engorgement of the gland (Fig. 12).

So far I have not said anything about prophylactic vaginal douches, and I only wish to speak about them to condemn their routine administration. Statistics of a large number of cases, observed in maternity hospitals

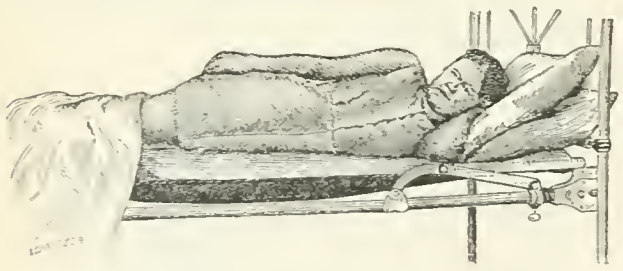

FIG. 12.—The Abdominal and Breast Binder Used in the Sloane Maternity Hospital, New York. (After McLane.)

where both methods of managing labor, with and without vaginal douches, have been extensively tried, show more favorable results for the latter class of cases. The investigation of the vaginal secretions, conducted by Döderlein, prove that the bacteria ordinarily found in the vagina are non-pathogenic, and that nature can very well take care of them. It is also an acknowledged fact that abrasions of the vaginal tract are more frequent in cases where douches have been employed, because they remove the lubricating mucus which nature so wisely provides. These abrasions form excellent entrance-gates for infectious material. I do not believe that the vagina can be made sterile, no matter how much douching is done, but I do believe that infectious material is very frequently carried into the genital tract by dirty instruments or fingers. If we have a case, in which labor is very protracted, where the secretions are purulent, or operative interference becomes necessary, a vaginal douche, preferably creoline or lysol, with clean instruments and after disinfection of the vulva, may be given; but we will save ourselves and our patients much trouble and annoyance if we discard them in all normal cases. Regarding the preparation of the patient, I have already pointed out the necessity of cleaning the vulva. The bed and everything which comes in contact with the patient must be clean, be it bed-cloth or towel. To clean the woman's genitals, old linen should not be used, but clean absorbent cotton, which is inexpensive. The vulva pad is also best made from absorbent cotton covered with cheese-cloth.

37 EAST SIXTY-SECOND STREET.

DIGESTION AND DIGESTIVE FERMENTS.[1]

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THE first act in the process of nutrition is that by which the food is liquefied and made capable of absorption. Man requires for his sustenance organic materials; that is, substances which have already formed part of organized bodies. When claimed as food these matters are invariably solid or semi-solid, and insoluble in water. The alimentary constituents of meat, herbage, and vegetables are mainly solid in form; and even the nutritious substances, naturally fluid, such as milk, white of egg, and other albuminous liquids, are usually more or less solidified by cooking when used for food. These substances, accordingly, before they can be taken up by the circulation, and made available for the nourishment of the tissues, need to be reduced to a soluble condition. This is accomplished by a chemical reaction involving the employment of what are called digestive ferments, etc.

The first act of digestion, then, is mastication, whereby the bolus is torn asunder by a grinding movement of the lower range of teeth against the upper. The act is partly reflex and involuntary, and partly voluntary. Mastication is assisted by a process called insalivation. The saliva is alkaline in reaction. Its chemical use is the conversion of starch into glucose or grape-sugar. This is due to the presence in the saliva of a substance called ptyalin, whose exact chemical composition is uncertain. Starch appears to be the only principle of food upon which saliva acts chemically. The functions of the stomach are to secrete a fluid called, roughly, gastric juice, the chemical composition of which all are familiar with. Of the two constituents we have only to deal, strictly speaking, with the solids this evening.

Regarding the functions of pepsin and acid, the former is produced by the central or chief cells of the peptic glands, and also most likely by the similar cells in the pyloric glands; the acid is chiefly found at the surface of the mucous membrane, but is, in all probability, formed by the secreting action of the parietal cells of the peptic glands, as no acid is formed by the pyloric glands in which this variety of cell is absent. The acidity of gastric juice is due, then, to free HCl, although other acids, such as acetic, butyric, and lactic, have been found. Pepsin may be procured by digesting portions of the mucous membrane of the stomach in cold water after they have been macerated for some time in water at a temperature of 80° to 100° F. (27° to 37.8° C.). The warm water dissolves various substances as well as some of the pepsin, but cold water takes up little outside of pepsin, which is contained in a grayish-brown, viscid fluid, on evaporating the cold solution. If now alcohol is added, the pepsin is thrown down in grayish flocculi. Glycerine also has the property of dissolving out the ferment; and if the mucous membrane be finely minced and the moisture driven off by absolute alcohol, a powerful extract

[1] Read before the New York County Medical Association, January, 16, 1893.

may be obtained by throwing into glycerine. This is the process used in the recovery of this ferment from the stomachs of hogs and calves. The finishing process is simply the painting over of glass disks, which are dried by artificial heat and then scraped with a sharp knife. The result is "pepsinum purum in lamellis."

Upon food entering the stomach it is met by two varieties of gastric glands—*i.e.*, peptic and mucous. The former are found throughout the whole of the stomach except at the pylorus, and are arranged in groups of four to five, which are separated by a very narrow band of connective tissue. Two or more tubes often open into one duct, which forms about a third of the whole length of the tube, and opens on the surface. The ducts are lined with columnar epithelium. Of the gland tube proper, *i.e.*, the part of the gland below the duct, the upper third is the neck and the rest the body. The neck is narrower than the body, and is lined with granular cubical cells which are continuous with the columnar cells of the duct. Between these cells and the membrana propria of the tubes are large oval or spherical cells, opaque or granular in appearance, with clear oval nuclei bulging out of the membrana propria; these cells are called peptic cells. Pyloric or mucous glands have longer ducts than the former, and into each duct two or more tubes open by narrow necks. The chief or cubical cells of the peptic glands, and the corresponding cells of the pyloric glands, during the early stage of digestion, if hardened in alcohol, appear swollen and granular, and stain readily. At a later stage the cells become smaller, but more granular, and stain even more readily. The parietal cells swell up, but are otherwise not altered during digestion. The granules, however, in the alcohol hardened specimen are believed not to exist in the living cells, but to have been precipitated by the hardening reagent, for if examined during life they appear to be confined to the inner zone of the cell, and the outer zone is free from granules, whereas during rest the cell is granular throughout. "These granules are thought to be pepsin, or the substance from which pepsin is formed—pepsinogen—which is during rest stored chiefly in the inner zone of the cells, and discharged into the lumen of the tube during secretion" (Langley).

The chief function, then, of pepsin and HCl in the stomach is the conversion of food into chyme, a substance of various composition, according to the nature of the food, yet always presenting a characteristic pultaceous, grumous consistence, with the undigested portions of the food mixed in a more fluid substance, and a strong, disagreeable, acid odor and taste.

The chief function of the gastric juice is to convert proteids into peptones. Peptones have certain characteristics which distinguish them from other proteids. 1. They are diffusible, *i.e.*, they possess the property of passing through animal membranes. 2. They cannot be precipitated by heat, nitric or acetic acid, or potassium ferrocyanide and acetic acid. They are, however, thrown down by tannic acid, by mercuric chloride, and by picric acid. 3. They are very soluble in water and in neutral saline solutions.

In their diffusibility peptones differ remarkably from egg-albumin and on this diffusibility depends one of their chief uses. Egg-albumin as such, even in a state of solution, would be of little service as food, inasmuch as its indiffusibility would effectually prevent its passing by absorption into the blood-vessels of the stomach and intestinal canal. Changed into peptones, however, albuminous matters diffuse readily and are quickly absorbed.

After entering the blood the peptones are very soon again modified so as to reassume the chemical characters of albumin, a change as necessary for preventing their diffusing out of the blood-vessels as the previous change was for enabling them to pass in. This is effected, probably, in greater part, by the agency of the liver (Kirke).

Pepsin acts the part of a hydrolytic ferment (proteolytic), and appears to cause hydration of albumin, peptone being a highly hydrated form of albumin.

Pancreatin.—The pancreatic secretion is perhaps one of the most, if not the most, important digestive fluids in the body. It contains at least four ferments: amylopsin, similar to diastase and the salivary ferment, which, however, is more energetic, and attacks not only raw starch, but cellulose and gum; trypsin, which transforms proteids into peptones in an alkaline medium; strapsin, which changes fats to glycerine and fatty acids, which are afterward saponified and emulsionized by the alkali of the secretion; and, lastly, a milk-curdling ferment. As some, if not all, the pancreatic ferments are themselves digested in an acid medium, it is of no use to give pancreatin while gastric digestion is going on, but it may be of use if taken with the food, so as to be in the stomach before it shall become acid. The greatest value of pancreatin practically attaches to the method, which has done such excellent service of partially digesting food before it is given. The use of pancreatized, or partly pancreatized milk, for the feeding of children, diminishes the danger from the formation of firm, caseous clots so frequent with cow's milk, but without any diminution in its nutritive value, since the casein is converted into a peptone incoagulable by acid.

For invalids an enfeebled digestion may be assisted by the previous partial digestion of various foods. The separate ferments of the pancreas have been to some extent isolated, and since the albumin-digesting ferment (trypsin) has some activity, even in a slightly acid or alkaline medium, it would have a range of activity different from that of pepsin.

Directions for the Use of Liquor Pancreaticus in Peptonizing Milk.—A pint of milk is diluted with a quarter of a pint of water and then heated to 60° C. (140° F.). Two or three teaspoonfuls of liquor pancreaticus, together with ten or twenty grains of soda bicarbonate, are then mixed therewith. The mixture is then placed in a covered jug, and the jug deposited in a sand-bath or warm situation, in order to keep up the heat. At the end of an hour and a half the product is boiled for two or three minutes.

The manufacture of pepsin has so improved that the officinal article no longer represents the most efficient or convenient form. The addition of sugar of milk is made for the twofold purpose of dilution to a fixed standard and for ease of dispensing, since the crude pepsin of most of the manufacturers is very hygroscopic and sticky. The large number of pepsins now in the market may be divided into two classes. 1st. Those where the pepsin is dissolved by HCl, and subsequently precipitated, dried, assayed, and diluted with sugar of milk to a standard strength. 2. The "scale," or pepsin in lamellis, which is dried upon plates without artificial dilution. Both probably include more or less peptones, but the latter the most. A simple glycerine extract of the stomach has been found efficient and durable in the laboratory, and it is singular that it has not been utilized as a pharmaceutical preparation. It is natural that every lot of pepsin made should represent a strength peculiar to itself, and assays have shown that many pepsins are far short of the claim made by their manufacturers, while others are more. This state of things shows the necessary uncertainty of the preparation as well as the unscrupulousness of the manufacturers. It shows, also, the necessity for the frequent examination of pepsin, and that the practitioner should, if he wishes to be sure of the product he is using, either make for himself, or cause to be made, a test like that described in the Pharmacopœia or given by the manufacturer whose product he is using.

Pepsin.—One of the active principles of the gastric juice, of the nature of a ferment, which has the property, in an acid medium, of changing albumin, fibrin, and other proteids into peptones, may be prepared in several ways. In the process of Boudault (French Codex) the extract obtained from the stomach is precipitated with lead

acetate, the precipitate washed, suspended in water, the lead thrown down by hydric sulphide, and the liquid filtered, evaporated at a low temperature to sirupy consistence, and mixed with starch. The process is complicated but serves to remove mucus and epithelium, and so leaves a purer active principle.

By the method of Schmidt the gastric juice is first neutralized by chalk, filtered, and evaporated to sirupy consistence, and then precipitated by absolute alcohol. Rayen obtained pepsin by treating the filtered gastric juice with about ten times its volume of rectified spirit, the resulting flocculent precipitate being dried and redissolved.

Action of Pepsin upon Food.—This is a subject upon which I can obtain little or nothing wherewith to verify my own experiments. After procuring cup slides for the microscope I endeavored to make careful tests upon beef fibrin, cheese, and other foods, which consume a period of from six to eight hours for ordinary digestion in the human stomach.

My first tests were very unsatisfactory owing to the absence of heat, and everything resembling the peristaltic or churning reflex movement. I found later, however, that by the aid of a cabinet built around the microscope I was able to keep up a temperature of 100° to 104° F., and by levers to agitate my test-slide sufficiently to obtain a fair view of the action of this most important ferment. The churning movement of the stomach is simply to cover the food upon every side with the pepsin and HCl. On introducing pepsin over a given specimen of fresh beef fibrin, no action is apparent at all excepting that the substance is rendered only slightly softer in consistence. Let us now add a minim of dilute HCl, and a very interesting phenomenon obtains. The beef assumes the porous aspect of a sponge, and if we now draw off by aid of a small piece of blotting-paper, the opaque fluid which is apt to obscure the process, we notice a gradual eating away or dissolving (chymification) of the specimen. Take a piece of cheese and you will obtain a slower action, but one also difficult to observe on account of its resemblance to a sponge, being already porous, and the ready formation of the opaque fluid heretofore mentioned, which is in reality peptone.

There is great danger involved in the use of several products at present on the market, owing to the septic matter they contain, evinced by the odor of sulphuretted hydrogen, which escapes upon removing the cork. I discovered the evidence of putrefaction going on, owing to the presence of mucous and other foreign substances, which should have been removed by the parties who produced the article.

The product of another house was so far behind their claim that I found in several cases no digestive action at all. This pepsin was very hydroscopic and in the last stage of decomposition. At the present time I am using a very superior article, called Pepsin Aseptic, which is of 4,000 strength, though I have repeatedly found by test that it runs 4,500, 5,500, and even 6,000 in digesting power. This is the product of a Detroit manufacturer. It has proved itself to be the most reliable, and up to the present time holds its title of "Aseptic Pepsin" very faithfully. The history of pepsin shows that the fact of a patient digesting better for a time after pepsin is administered, especially if HCl is also an ingredient of the prescription, however satisfactory it may be to all parties, is far from being conclusive as to the physiological activity of the pepsin. It is a ferment pure and simple. As has before been stated, the same amount of pepsin will keep on digesting for a long time if new acid be added. Only a small part is absorbed and may be detected in the urine.

Of the properties of pepsin little is known. In a condition as pure as we can obtain it, pepsin is shown to be a colloid, differing from albumin in its reaction with nitric acid; it does not give the xanthoproteic reaction (yellow on heating), is not precipitated by ferrocyanide of potassium, nor by tannic acid, silver nitrate, or iodine. I have endeavored to finish some experiments on it, but at the present am not in a position to go deeper into the chemical constituents of this ferment.

Many very able men have advocated the use of pepsin as an atomized inhalative in membranous croup, with a view to digesting away the membrane by an agent which will not attack living tissue, though personally I have never met with much success in this field.

Pepsin should never be given with alcohol, as this substance weakens or suspends its action; alkalies, which destroy it; or bismuth, which suspends and destroys its activity; elixirs are especially objectionable. Of the fluid preparations I have found "Pepsin Cordial," which is a combination of orange wine and pepsin of 2,000 strength, the most valuable. During the heated term I had occasion to use this product in cases of intestinal fermentation and diarrhœa, where it appeared to work very satisfactorily.

During the summer I was startled by the appearance of an article in the *Journal* which referred to the high digestive activity of a preparation said to be produced from the Pawpaw melon. This is only another name for our old friend "Papayine," which is the juice of Carica papaya or Pawpaw melon. I had made a series of tests with this substance, and found that its digestive power was very small indeed, if any. In my first experiment I followed the pharmacopœial tests, giving every advantage in its favor, and after eight hours, exposure the beef fibrin and egg albumin remained the same as at start, while the pepsins had digested their respective volumes without any trouble whatever. These tests were carried on under the same conditions and in the same artificial digester, agitation, etc., being precisely equal. The manufacturers claim that this formula cannot be used in the way in which we use pepsin, but if not, then how are we to use it? If its action is destroyed by an acid medium it is worthless, since the acidity of the stomach, if destroyed, suspends digestion and pepsin power is rendered inert. Administered before a meal I do not see just what action it can exert, and have concluded that it is nil and worthless. To-day I am positive that my conclusions are absolutely correct, and that the Pawpaw melon and its derivatives, as manufactured in this country, are worthless.

How to Test Pepsin.—Boil two fresh eggs for fifteen minutes, cool, and after freeing the coagulated albumin from all yolk and superficial moisture, press by means of a spatula through a brass sieve having thirty meshes to the linear inch. After thoroughly mixing the moist divided albumin, weigh out 500 grains, and transfer to a mortar. Measure out exactly 11 fluid ounces of water, previously warmed to 100° F.; carefully triturate the albumin and part of the water, added in portions, and thereby obtain a uniform division of the particles; transfer this by the aid of the remaining water to a flask having a capacity of 16 fluid ounces, or to any suitable container in which the temperature can be held constant; to this add 50 minims of muriatic acid, United States Pharmacopœia (specific gravity 1.16, containing 31.9 per cent. HCl), and bring the fluid to exactly 104° F.; then add $\frac{1}{8}$ grain of the pepsin under examination, noting the exact time of the addition; then immerse the flask in a water-bath, heated to exactly 104° F., and provided with the necessary apparatus for maintaining a constant temperature. After digesting six hours with frequent (every minute or two) rotation of the digestive fluid, remove the container and add some cold (distilled) water to stop the digestion.

It will be found that the 500 grains of egg albumin, tested with $\frac{1}{8}$ grain of aseptic pepsinum purum in lamellis, will be completely dissolved, an indication of a digestive strength of 4,000.

Hints to Facilitate Comparative Pepsin Tests.—1. Calculate the number of eggs wanted at four hundred grains of albumin per egg.

2. Carefully examine the eggs after boiling, and reject

all having the least pinkish color, bad odor, or appearing granular when broken.

3. After the eggs have boiled fifteen minutes, place them in cold (best running) water until perfectly cold. Remove the superficial moisture by means of a linen cloth, and proceed to force the albumin through a sieve.

4. Fill a copper water-bath nearly full of water, and, while you are proceeding with step 5, heat it to about 110° F.

5. After thoroughly mixing the finely divided egg albumin, carefully weigh out five hundred grains, and place in a mortar of a capacity of six to eight fluid ounces. Measure out exactly eleven fluid ounces of water, previously warmed to about 100° F., and add about one-half an ounce to the egg, and carefully triturate, continuing to add some water in small portions, or about four fluidounces, until the particles are uniformly mixed, and then transfer the contents to a sixteen-fluidounce bottle. By means of the remaining water, insure complete removal of all the particles of egg to the bottle, carefully avoiding any loss of the water, which is an important factor in making comparative tests.

Proceed in the above manner to prepare as many bottles of albumin as you have different pepsins to test.

6. Add to each bottle exactly fifty minims of hydrochloric acid, United States Pharmacopœia, cork and thoroughly mix. Mark on the top of the corks as follows: 1, 2, 3, etc., respectively.

7. Place the bottles in the water, previously heated to about 110° F., in the copper-bath, and now immerse the thermometer in one of the bottles, and when the temperature of the contents of each has risen to 104° F., remove the lamp, and add cold water to the water in the copper-bath until it reaches exactly 104° F., and then reduce the flame to a point where it will remain safely lighted, which is sufficient to keep the water at 104° F.

8. Next weigh out the required amounts of pepsin, and note the time of addition, and in which bottle each brand is placed.

9. Digest frequently (about every minute or two), rotating or inverting the bottles until the albumin in any one is nearly or completely dissolved, and then remove the bottles from the water-bath, and fill them with cold water to check digestion.

330 West Thirty-third Street.

KELOTOMY FOR STRANGULATED HERNIA,

With Persistence of Symptoms of Obstruction—Consecutive Operation with Recovery, Etc.[1]

By THOMAS H. MANLEY, M.D.,

NEW YORK.

As cases of strangulation of the intestine from hernial descent are of common occurrence, and as the success of treatment, in all, largely depends on release of the constriction and on the free and unimpeded circulation of the ingesta through the lumen of the bowel after its return to the cavity of the peritoneum, it becomes of importance that in all cases of strangulated hernia which we are called upon to treat, whether by operation or taxis, before we can consider our measures of relief as amply effectual, we should positively assure ourselves that this has been accomplished.

So many cases are on record in which, after operation for strangulation, vomiting, pain, collapse, and death often follow, that in a considerable number of them, no doubt, this mortal sequence has followed in consequence of the constriction having been imperfectly treated, or entirely overlooked. In the same class of cases, when treated by taxis, the same pathological condition is encountered, but it must be assumed, much oftener.

The case on which this report is based, had the following history:

[1] Notes on pathology of cases presented at the New York Pathological Society, November 17, 1892.

History.—J. A. R——, aged twenty-six, of medium height, former good health, a letter-carrier by occupation, on the morning of October 6, 1892, without any provocation, was taken with severe colicky pains in the hypogastrium. Hot aromatic drinks were given him and poultices applied over the seat of pain. He lingered through the day and night without relief, until the following morning, when the family physician was called in. On making a careful examination it was discovered that he had a strangulated inguinal hernia on the left side. After many cautious efforts at taxis, finding that it could not be reduced, an operation was advised, when I was sent for to operate.

As I was away from home, the doctor, not wishing to delay until the following morning, and as the relatives would not have him sent to hospital, called in a neighboring practitioner, performing the operation himself.

On the Sunday following, the 9th, I was again sent for. On arriving at the house of the sick man I was informed that after operation, when the effects of the anæsthetic passed off, his pain returned with more violence than before; that the vomiting had recommenced, which was now fecal, and that he was in a state of great exhaustion. Coming to the man's bedside and making a personal examination, I saw at once that his condition was desperate. He lay on his back with his knees drawn up. His features were pinched, sunken, and dusky, and, though with pin-hole pupils from morphine narcosis, yet he was suffering great physical and mental anguish. He said that he feared he was beyond hope, but begged of us to try and save his life.

Physical Examination.—No movement from the bowels for eight days. Urine scant and deep-brown color. Belly ballooned up and everywhere as tight as a drum. Tympanitic resonance everywhere. There was a strong odor of fæces from the mouth. Respirations, 12 per minute; temperature, 100½ F.; pulse, 144, feeble and compressible. Hands and feet cool. Body bedewed with a cold but profuse perspiration. No evidence of any visceral disease except in the abdomen. In other words, his subjective and objective symptoms were those of peritonitis, bordering on the moribund state.

Now the question arose, what was to be done?

Diagnosis.—1. Was this a case of septic peritonitis, attributable to infection of the wound or perforation of the intestine? 2. Was it one in which, possibly, there was a matting or kinking of the reduced intestine, which caused an occlusion of its lumen? 3. Or was it possible that strangulation yet remained?

My own first impression was that the great intestinal distention and constipation were the result of that paretic state of the bowel, always seen in acute peritonitis; a pathological condition which art, unhappily, is often utterly powerless to remedy; and that our patient was a doomed man seemed almost inevitable. But the wound looked healthy and had healed by primary union. I was also assured that there was no evidence of gangrene of the intestine at the time of operation; hence sepsis might be excluded.

As to the second, intestinal adhesions, that seemed the most probable, for though there were peritonitis from infection, there should have been some short abatement of the symptoms of strangulation after operation; but there were none; not for a moment after consciousness was restored. If this condition of internal obstruction were present, even then our patient's case was equally hopeless. Of course, it may be said, in answer to this, that a simple (?) exploratory incision would promptly lead to the seat of the difficulty, which could be readily remedied. But in my experience these exploratory incisions are always full of peril to life; besides, in this case, the profound collapse present would not justify one in hazarding a procedure almost certain to end in "death on the table."

Coming back again to the wound: though it had closed well, there seemed to me an unusual fulness over

the inguinal canal. This, of course, might have been partly attributable to an inflammatory infiltrate. But on careful palpation it had a peculiar feel, not of the character we would expect in an inflammatory tumor. Hence, I decided to reopen it and explore outside the abdomen.

Operation.—In this case, as I do in all others of strangulated hernia attended with the slightest degree of shock, I employed local cocaine analgesia, instead of pulmonary anæsthesia. Spraying, according to Reclus's method, the entire operative area with a one per cent. subcutaneous injection, and employing but eighty-five drops, the wound was reopened with the fingers. Carrying up the index of the left hand along the open hiatus, the tip, as it engaged in the canal, came on the round, firm surface of what I at first supposed was an extended coil of intestine, which could be drawn down but could not be pressed through the internal ring. Bringing the candle closer to it, it was seen to be the sac. Now, by drawing gently on the base of this conoidal mass with one hand, and following along its upper surface with the index of the other hand, the neck of the sac was reached, just outside the internal ring, at the point of strangulation. The sac was now opened, the constriction divided, and the bowel returned into the cavity of the abdomen. The intestine, though imprisoned nearly four days, presented a healthy appearance. Of course, it was not very tightly gripped, or it would have long since broken down and given way.

Combination of Radical Cure.—After the intestine was reduced, as the parts were quite insensible to pain, an operation for radical cure, by Championnière's method, was performed.

Sequelæ.—Patient expressed himself as enormously relieved after the intestine was released. His general condition was in every way very much better after the operation than before it.

It may be added, that owing to his extreme exhaustion he was operated on as he lay in bed, his body well covered, except over a very small space in the inguinal region. Two hours after operation he had a large movement from the bowels. His recovery has been rapid and complete, and he is now on his mail route as usual.

In the *Journal de Médecine de Bordeaux* (December 4, 1892) Dr. A. Boursier gives a full and interesting account of a case of strangulated right inguinal hernia, reduced *en masse*. The case possesses so many similar features to the one which is here presented by me, that the citation of a few features of it are so *à propos* as to justify their inclusion with these notes.

He says that, although this pathological condition is well known to surgeons, yet it is very rare. His patient was a man sixty-three years of age, hearty and vigorous, who had a right inguinal hernia about the size of a hen's egg for eight years, which was only imperfectly contained by a truss. At eight o clock in the morning of November 9, 1892, he suddenly felt the hernia slip down, when it began to give him great pain. By moderate pressure he succeeded himself in reducing it. But the pain continued, and on the second day he commenced to vomit. On the third day a physician was called in, who in turn invited in another confrère. Purgatives and clysters were freely employed without any effect. On the fifth day, Professor Arnozau with Professor Boursier were summoned. They found his general condition very bad. His pulse was feeble and intermittent, with the abdomen distended and painful. Over the right inguinal canal there was a marked fulness, exceedingly tender to the touch. Passing the index up along the spermatic cord, through the external ring, which was largely opened, a round, movable, painful tumor was felt. As in the case cited, the hernia had been pushed up into the inguinal canal, in which it was held by the strong, elastic fibres of the intercolumnar fascia. On operation, which was immediately performed, the sac, on exposure, was found to be highly inflamed, thickened, and friable. It contained a small knuckle of intestine with its mesentery, along with a quantity of bloody serum. The ring of strangulation consisted of a thick collar of sclerosed fibrous tissue. One hour after operation the patient passed gas freely by the rectum, when all the perilous symptoms disappeared.

In this latter case, as in the former, it does not appear that the grip at the point of strangulation was very tight, else the consequences might not have been so fortunate. These two cases, then, though strictly speaking they do not belong to the same class, yet, taken together, emphasize the importance to always, whether we do a kelotomy or not, attend to it that the hernia is entirely liberated before we assume a complete reduction has been effected. Besides, they warn us of the importance, in all cases of sudden and protracted hypogastric pain, though visible hernia is not present, to very carefully examine for strangulated bubonoceles, or those hernial extrusions which engage in, or are confined in, the inguinal canal, between the rings.

Progress of Medical Science.

Parasitic Melanoderma.—In the *Lyon Médical* for July 31, 1892, an account is given of a case presented by Bondet, of melanoderma that might have been mistaken for Addison's disease. The patient came to the dispensary in rags. These furnished a lodgement for innumerable lice. The man had pains in the limbs, diarrhœa, and a veritable cachexia, without visceral lesion of any kind. There were the typical changes of general pityriasis, with an intense pigmentation of the skin and the mucous membranes, especially those of the lips and hard palate. This proved to be a typical case of vagabond's disease, in which the distribution of pigment is the reverse of that in Addison's disease. The pigment in vagabond's disease is less marked in the axilla and in the genital region than elsewhere. In Addison's disease these localities are most deeply shaded. Another case of Bondet's, diffuse generalized melanoderma, proved to be one of scleroderma, most marked in the upper extremities and in the hands. The fingers were stiff and spread apart. The tegument was dry, atrophied, and sclerosed. The countenance was thin, immobile, and resembled marble. Sensibility was intact, and there were no nervous symptoms.

Gonorrhœal Infection of the Mucous Membrane of the Mouth in New-born Infants.—From the study of five cases of gonorrhœal infection of the mouth in the Königsberg Obstetrical Clinic, Dr. Rosinsky has drawn the following picture of the disease: Without preceding inflammatory redness, a white discoloration appears upon the anterior two-thirds of the tongue, the plaques of Bednar, the hamulus pterygoideus, and along the ligamentum pterygomandibularum in the lower jaw, finally upon the front parts of the gums. After twenty-four to thirty-six hours the color becomes yellow. The patches elevate themselves plateau-like over the surrounding tissues, and their surfaces are raw. The superficial epithelium forms, with extravasated pus-cells, a thick layer, resembling the scrapings from the cut surface of a septic spleen. On the third day the regeneration of the epithelium begins; this is marked by an inflammatory redness around the edge of the patch. Healing follows without treatment, in an ideal manner, no trace of scar or discoloration remaining. From the microscopical examination of some excised tissue, Rosinsky has gleaned the following: The gonococci were never found, in stained sections, intra-cellular. They were seldom found intra-cellular in the superficial flakes. Gonococci cannot penetrate into the body of healthy, living cells; they accomplish this only when the single cells are cut off from the conditions of life. In the connective tissue gonococci invasion was found. Rosinsky believes this to be typical pure gonorrhœal inflammation of the mucous membrane. The relatively

infrequent gonorrhœal inflammation of the mucous membrane of the mouth in adults, in contradistinction to infants, he believes to be due to the tenderness of the epithelium of the mouth in the new-born.—*Annals of Gynecology.*

Medicated Inhalations.—The observation of Dr. A. Irsai on the effects of the inhalation of various substances on the lungs and air-passages, show that almost immediately after a few inhalations of air impregnated with turpentine the lungs became pale, but regained their ordinary appearance on the readmission of pure air; a second administration of turpentine vapor was followed by the same appearances as the first. The cause of the pallor, in the author's opinion, was doubtless a spasmodic contraction of the pulmonary vessels—probably due mainly to peripheral action. When juniper oil or oil of pinus sylvestris was employed, results of a similar kind, but less in degree, were obtained. The latter, however, is considered a more powerful vaso-motor constrictor than turpentine oil. With oil of eucalyptus, anise oil, peppermint oil, and menthol, scarcely any change was produced in the color of the lungs. With thyme oil and thymol, three or four inspirations were followed by a distinct reddening, which increased as they were continued. Creosote, and, in a still greater degree, guaiacol, produced redness, there being rapid relaxation of the vessels and great hyperæmia of the lungs. From these observations Dr. Irsai concludes that in acute catarrhal affections, with swelling, hyperæmia, and profuse secretion, substances should be selected for inhalation which produce anæmia, and that in chronic torpid conditions, or in phthisis where the supply of blood and the nutrition of portions of the lung are defective, substances which induce hyperæmia should be used. Of course it is needful to exercise due vigilance in employing creosote or guaiacol in cases where there is any tendency to hemorrhage.—*The Lancet.*

The Effect Upon the Offspring of Mercury Administered to Pregnant Syphilitic Women.—Dr. Etienne finds that the mortality of infants born of syphilitic mothers who have not been subjected to mercurial treatment is enormous—over seventy-six per cent. at birth, and over ninety-five per cent. when the few children born alive are kept under observation (*Therapeutic Gazette*). When the mothers have been subject to antisyphilitic treatment this mortality drops to from eleven to sixteen per cent. If the treatment is pushed during the course of pregnancy, statistics show it is reasonable to hope that very few, if any, of the children will perish. Of ten cases observed by the author not a single infant died. Eighty per cent. of the infants were born at term. Syphilis exerts its most pernicious influence upon the offspring during the fifth, sixth, and seventh months of intra-uterine life. From personal observation Etienne concludes that paternal syphilis is distinctly less pernicious in its effect upon the offspring than is that derived from the mother. When the mother becomes infected during the first three months of pregnancy, and is not treated, the results, as regards the offspring, are more disastrous than when the disease is acquired later. In these cases a mortality of one hundred per cent. is reached. When infection occurs during the fourth and fifth months the results are somewhat more favorable. When the mother becomes infected during the eighth month an apparently healthy infant may be born, although in one case reported by the author, in which infection apparently took place in the eighth month, the infant was seemingly healthy at birth, but later developed syphilitic lesions. In all cases of syphilis acquired during pregnancy prompt treatment was most efficacious. In no instance were any unfavorable results noted of the result of treatment. In contrast with these conclusions it is interesting to note that Cassowitz states that of thirty-five syphilitic women who were treated by inunctions the delivery was normal in all. Of twenty-three treated by inunctions and iodide of potassium, thirty-seven per cent. were delivered before term. Of nineteen treated by iodide of potassium and bichloride of mercury internally fifteen per cent. gave birth before term. Of seventeen treated by iodide of potassium alone forty per cent. were delivered before term.

The Indications for Thoracocentesis.—Professor Potain maintains, in opposition to the teachings of Verneuil, that tapping the chest converts serous into purulent exudations. Empyema, according to Potain, is not more frequent than formerly, but is more often properly diagnosed. Four things are to be considered in thoracocentesis (*International Journal of Surgery*): First, the presence of functional disturbances. Second, the quantity of exuded fluid. Third, the duration of the exudation. Fourth, the nature of the fluid.

Functional Disturbances.—Considerable dyspnœa is an indication for thoracocentesis, because it usually points to the existence of a large quantity of fluid. It may, however, be due to other causes, such as capillary bronchitis, miliary tuberculosis, etc. In such cases the performance of thoracocentesis must hinge upon the question whether the dyspnœa is due to the exudation or the accompanying complications. Dyspnœa, moreover, is an unreliable symptom; it may be completely absent, even when the quantity of fluid is excessive. The same applies to cyanosis. As regards the tendency to syncope, still less reliance can be placed upon this symptom, because it frequently appears too late to serve as a danger-signal. In general, functional disturbances are unreliable signs; but when they occur in a case where positive indications for operative interference exist, they should impel us to make haste. Finally, in exceptional cases, if a careful study of the existing conditions shows that the disturbances are actually the result of the exudation, they may serve as indications for thoracocentesis, even if for other reasons the operation had not been attempted.

Quantity of Fluid.—A profuse accumulation of fluid demands thoracocentesis for two reasons: first, because the danger of syncope or asphyxia in general is in direct relation to the quantity of fluid; second, because the long time required for absorption to take place increases the danger. As long as the fluid does not reach to the level of the clavicles, the quantity of exudation need not enter into the question of an operation. If, notwithstanding that the level of the fluid extends to the clavicle, there is no displacement of the diaphragm or mediastinum, no marked distention of the chest, and the lung occupies a considerable space in the thoracic cavity, the operation may be postponed. If, however, the lung is entirely compressed, especially when the thoracic cavity is distended, an immediate operation is indicated. The age of the fluid may become an indication for thoracocentesis, even when the quantity of exudation in the pleura is moderate or slight. The exudation reaccumulates after evacuation, if it is recent; on the other hand, late operation is sometimes attended with serious dangers. The fluid should therefore be removed if no hope exists that it may be absorbed by medicinal treatment. Authors who have written upon this subject have designated three weeks as the limit. It is a matter of difficulty, however, to positively determine the age of an exudation, inasmuch as the development of the effusion does not always correspond with the beginning of the disease. The nature of the fluid can be determined with certainty by puncture. Without resort to this we deal only with presumptions, but these are sufficient to indicate a puncture, which according to the case may be simply exploratory, or at the same time serve to evacuate the fluid. After thoracocentesis has been decided upon, it must be determined to what extent the contents of the pleural cavity are to be evacuated. In the majority of cases the complete emptying of the pleural cavity is attended with many grave dangers. On the other hand, the evacuation of a small amount of fluid may be useless if a large exudation be present. As a rule, about one-half of the fluid should be removed.

MEDICAL RECORD:

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TRUE AND FALSE DIPHTHERIA.

THE specific exciting cause of diphtheria is by many, if not most, observers held to reside in the Klebs-Loeffler bacillus. But the task of separating the diphtheric from scarlatinal and other pseudo-diphtheritic sore-throats has not yet been satisfactorily completed. Many investigators have, however, recently again taken up these problems, the solution of which will naturally have to guide the future actions of the physician when confronted with cases of the kind in question.

Some light is thrown on the subject by Dr. Booker, who has just published a paper entitled "The Relation of Pseudo-diphtheric Angina to Diphtheria, with Special Reference to Scarlatinal Pseudo-membranous Angina," in the *Bulletin of the Johns Hopkins Hospital*. The author says that an epidemic of scarlatina prevailed in Baltimore the past winter, characterized by frequent complication of pseudo membranous angina, which in some cases preceded the exanthem several days, and so closely resembled diphtheria as to render a diagnosis with the unaided eye difficult, if not impossible. In many cases, even where the exanthem was present, the throat affection had such marked characteristics of diphtheria that physicians were often puzzled for an opinion, and had reference in the treatment chiefly to the latter disease.

The importance of a clear distinction between affections so serious in character, and which, resembling each other clinically, yet differ in nature and the treatment required, led him to take advantage of the abundant material furnished by this epidemic to make a comparative study of the bacteria found in scarlatinal angina with the bacteria known to be present in true diphtheria.

It is not our purpose to give a detailed account of the researches of Dr. Booker, but he appears to have made a really scientific study by means of methods above suspicion. It cannot fail to be instructive to glance at some of his results and conclusions.

Speaking of the relation of the bacilli to the false membrane he states that the bacilli are found in and underneath its superficial layers. The most superficial layer is made up largely of a great number and variety of organisms, mostly saprophytic. The layer of the membrane in which the diphtheric bacilli are found is rich in cells. As the pseudo-membrane passes inward toward the basement membrane fewer cells are found, and here, too, the bacilli are much fewer. Then follows a wide fibrinous layer, the thickest part of the false membrane, and this lies directly upon the basement membrane of the mucosa. Few or no bacilli are found here. The cellular outer zone is the oldest part of the pseudo-membrane, it is the first reaction product to the original irritation, resulting from the action of the diphtheric virus. In the growth of the false membrane the force exerted from below raises the membrane more and more, and causes it to overlap the adjacent preserved epithelium in a mushroom-like manner of growth. The bacilli do not invade the blood and tissues of the body, but the toxic products of the diphtheric bacilli are absorbed and definite lesions result in various tissues of the body.

The final outcome of the work of the author, taken in connection with that of other investigators, is stated in the following propositions:

Pseudo-membranous affections of the throat occur secondary to scarlatina, measles, and, perhaps, other infectious diseases, which often give the clinical features of diphtheria, but which differ from this disease in nature and etiology.

The clinical features are not sufficiently distinctive in all cases to differentiate these affections from diphtheria.

The anatomical changes in the body resulting from the effects of the bacillus diphtheriæ have been carefully studied by different investigators and appear to be characteristic. A like careful study has not been made of the anatomical changes resulting from pseudo-diphtheric processes, but so far as this study has been made, it may be safe to consider the anatomical changes as entirely distinct from those of diphtheria.

The anatomical changes, save the pseudo-membrane, resulting from the effects of the bacillus diphtheriæ are not occasioned by the direct action of the bacilli, which do not invade the body, but by a toxic substance produced by the bacilli. These changes are characterized especially by focal necrosis of tissues, with peculiar splitting of the nuclei of cells.

The anatomical changes resulting from scarlatinal diphtheria are accompanied with an invasion of the body by streptococci, and are largely suppurative processes which appear to be the direct effect of these organisms. Necrosis of the tissues also occurs in this disease, but a comparative study has not been made with the necrosis resulting from diphtheria.

The etiological factor furnishes the certain criterion for the separation of diphtheric from pseudo-diphtheric processes, but even with this advantage, a differential diagnosis may be difficult in individual cases.

Both measles and scarlatina render the tissues especially vulnerable to the diphtheric bacillus, and complications of diphtheria with these diseases are not uncommon.

The constant occurrence of streptococci in pseudo-diphtheric processes, and in numbers proportionate to the degree of tissue changes, indicates a causal relation of the cocci to these processes.

This view is strengthened by the observations of Soerensen, that the cocci form the advance guard of the anatomical changes; that in quite fresh cases of scarlatinal diphtheria they have also penetrated deeply into the mucous membrane; that they are scattered in the surroundings of lymphatic gland abscesses; that they form the

advance-guard of the infiltration in extensive phlegmon, and in cases where infarction of the spleen and peritonitis occur together they are found in the coating of the spleen.

The streptococci found in pseudo-diphtheric angina have not been identified as one species or differentiated from other known streptococci, but it appears probable that different varieties of streptococci may occur in different cases of pseudo-diphtheric angina, and there is also some ground for the belief that certain varieties of streptococci are associated with the more serious cases of pseudo-diphtheric angina.

This view of the causal relation of streptococci to scarlatinal pseudo-membranous angina has nothing to do with the specific etiology of scarlatina, of which we are at present entirely ignorant.

It is, of course, rather unfortunate that the immediate result of these observations cannot give much assistance to the practitioner who is in doubt as to the true nature of a suspicious case; for the physician must act at once, and will be unable to await the result of a bacteriological examination. When in doubt, it will always be wise to err on the side of safety, and to take those measures which prudence must suggest. Eventually we may hope to get definite practical rules for our guidance from a combination of laboratory and bedside studies.

SMALL-POX AND VACCINIA.

Although it is generally assumed to be true that variola and vaccinia are manifestations of the same virus, the scientific evidence upon which this doctrine rests has often been called in question. In a recent issue of the *Revue scientifique*, the subject is once more discussed in the light of new experimental research. As late as 1891 Chauveau asserted that it was impossible to produce cow-pox by variola. This French observer stoutly maintained that each of these diseases had its separate virus, even if originally the same micro-organism might have caused them. But in a recent article appearing in the *Revue médicale de la Suisse romande*, Drs. Eternod and Haccius have formulated a series of conclusions which tend to re-establish the older view concerning the truly variolous nature of the vaccine disease. The conclusions referred to are about as follows, and represent the results of recent experimental inquiry:

1. Variola is communicable to the bovine species by inoculation, provided proper precautions are taken.

2. True variola inoculated upon calves can be propagated, but changes in character in later generations, and at length assumes the features of ordinary vaccine disease. Both as regards clinical symptoms and pathological lesions, this gradual change never fails to appear.

3. This variola vaccine acts like ordinary vaccine virus both upon man and calves. It produces a benign local vesiculous eruption, identical with that seen after vaccination.

4. Inoculation with variola vaccine renders ordinary vaccination inoperative, and probably confers immunity from small pox.

5. The degree of virulence of variola vaccinations is reduced by successive removes through fresh calves.

6. As to the duration of immunity conferred, and other practical inferences to be drawn from their experiments, the authors are awaiting the results of further experience.

7. The original identity of cow-pox and small-pox, while probable, is not absolutely certain.

8. Whether or not the change from variolous virus to variola vaccine is one of mere attenuation or radical alteration is not yet clearly established by their personal experiences.

But this identity is claimed to have been demonstrated by Dr. Fischer (*Semaine médicale*). This author takes the virus of a small-pox pustule at the time of its maximum intensity, and by practising crucial incisions in the calf, raises a crop of typical small pox pustules in that animal. Moreover, this bovine small-pox can be communicated through a series of animals without diminution of its original power. It can be employed in children, and acts in all respects like ordinary vaccine virus, producing merely a local benign eruption. Dr. Fischer has used the lymph thus obtained in thousands of cases without untoward symptoms of any kind. He believes it to be safe and reliable. Thus it would seem that a practical demonstration has been given, showing that the virus of human small-pox can be transformed into that of ordinary vaccinia.

ANOTHER THRUST AT THE MEDICAL LAW.

There is no law existing on our statute-books that requires more watching against invasion and injury than the one regulating the practice of medicine in this State. Every session some trick is manifest on the part of its enemies. Under the guise of amendments the boldest strokes are made to nullify its fundamental provisions. This year is not without exception, as witness the following, introduced into the Assembly by Mr. Deitsch, which is, now in the hands of the Committee on Public Health:

"An act to amend chapter five hundred and seven of the laws of eighteen hundred and ninety, entitled 'An act to establish boards of medical examiners of the State of New York for the examining and licensing of practitioners of medicine and surgery; to further regulate the practice of medicine and surgery.'

"The people of the State of New York, represented in Senate and Assembly, do enact as follows:

"*Section* 1. Section eleven of chapter five hundred and seven of the laws of eighteen hundred and ninety is hereby amended so as to read as follows:

"*Section* 11. This act shall not apply to any student who duly matriculated in some duly incorporated medical college of the State of New York, provided that such student shall file with the secretary of the board of regents of the University of the State of New York a certificate setting forth the fact of such matriculation, verified by the applicant, and signed by the president, secretary, and dean of the faculty of the college in which matriculated.

"*Section* 2. This act shall take effect immediately."

It is very plain to see that this amendment would exempt everybody except those graduating outside of New York State. The law would then be *high protection* on American medical or New York medical industry. In a word, this bill would nullify the law as far as graduates from New York colleges are concerned—which feature is one of the most important ones in the law now in force.

Thus far this is one of the most absurd attempts to render inoperative one of the best of laws for the protection of the people.

THE ANÆMIA OF HEREDITARY SYPHILIS.

One of the most constant manifestations of hereditary syphilis is anæmia. Nevertheless, our knowledge of the blood of syphilitic children, of its richness in hæmoglobin, and of the proportion of colored corpuscles to leucocytes, is quite incomplete. Dr. Loos has recently undertaken some studies on this subject, at the clinic of Professor Escherich, at Gratz. The result of his observations are published in the *Wiener klinische Wochenschrift*, and may be briefly stated as follows:

Infantile anæmia is invariably found in hereditary syphilis, and it may reach a high degree. This anæmia is characterized by a diminution of red blood-globules, by changes in their structure, by the appearance of megalocytes and microcytes, as well as nucleated erythrocytes. These bodies are sometimes found in large numbers. The syphilitic anæmia is further distinguished by leucocytosis, often of great intensity.

Finally, myeloplaxes are commonly observed in the blood in congenital syphilis. The author is convinced that death is often directly due to the anæmia of syphilis, and this makes the subject one of direct practical interest to the physician.

Two diseases observed in childhood may produce profound anæmia which resembles that of syphilis. The first is splenic anæmia, accurately described by Jaksch as anæmia infantum pseudoleucæmica, and the second is severe rachitis. But, clinically, these diseases differ, a point of great moment in their treatment.

SOME SANITARY INCONSISTENCIES.

One of the curious vagaries of modern sanitary progress is that the community has begun to look after the purity of its milk and water with so much more zeal than it does after its beer and spirits. The Massachusetts State Board of Health, for example, has spent a great deal of money and expert labor in examining spring water, rivers, and cow-yards. Chicago has even established a "Department of Milk," with a chemist at $3,000 a year, and nine inspectors at $1,000 a year. Their business will be to watch every place in which milk is on sale. It would be a low estimate to suppose that the country spends a million a year prying into its milk and water.

In this and every other city or town, however, saloonkeepers are allowed to sell freshly-made whiskey retailed at forty cents a quart, also stale or unripe beer and other alcoholic liquors which may contain as much fusel oil, yeast, and cheap bitters as the dealer's conscience chooses. There is not much doubt that alcoholic drinks kill and injure vastly more persons than do milk and water. It is equally certain that some of the harm thus done could be prevented by the enforcement of laws forbidding the sale of impure alcoholic drinks. There has got to be almost a panicky feeling among sensitive people in regard to drinking-water. Probably most of these quiet their nerves by boiling their Croton or drinking bottled waters. Others perhaps make the danger lurking in water an excuse for drinking bad wine or poorly made beer—and that means nearly all American beer. We need to inculcate a juster sense of proportion among our sanitary advisers and our law-makers.

CANCER AND COCCYDIOSIS.

The adherents of the theory or doctrine that cancer is a parasitic disease have received a new and powerful ally in the person of Professor Metschnikoff, of Paris. In an article translated for the *British Medical Journal*, the writer in question discusses the subject without bias, and comes to the conclusion that beyond doubt parasitic bodies exist in the cells of cancerous tumors. Metschnikoff begins his article with the statement that Cohnheim's embryonic theory of tumors was always a pure speculation, and is not in accord with our present knowledge of comparative pathology. He then describes a peculiar parasitic disease of rabbits known as coccydiosis, which resembles cancer in many respects, and particularly in that, though of microbic origin, it is not contagious. He then recites the history of the discovery of alleged parasites in cancer cells. Beginning in 1889 with the discovery by Darier of psorospores in Paget's disease, there were soon published a number of observations describing the supposed organisms of cancer. Very shortly, however, it was shown that most, if not all, of these bodies were merely fragments of degenerated cells. A reaction followed, and the microbic theory of cancer fell into disrepute. Recently, however, new facts have been published, and the observations have been so numerous, and the descriptions so explicit and uniform, that Metschnikoff thinks it can no longer be doubted that a peculiar intra-cellular parasite does exist in the cells of cancer. These foreign objects are round bodies which undergo various stages of growth, and resemble the young coccidia of rabbits. The life history of the organisms is as yet but little known. Nor is it at all proved that, even though present in the tumors, they are the cause of them. Still, the fact of their existence is of great importance, for it is most likely that they bear an important etiological relation to the tumors in which they are imbedded. If Metschnikoff and those who believe with him are right, it will be only a matter of time when their origin and their mode of entrance into the system are discovered. We shall then be in a position at least to prevent cancer, and perhaps find some sure way of curing it.

It may be of interest, in conclusion, to add a description of the protozoa given by Mr. H. G. Plummer, who in fifty-three specimens has succeeded in every instance in finding the organisms. They are, he says, "found most plentifully near the growing edge of the cancer, and in the glands which become secondarily affected; but they are not found, or only found in very small numbers, in that part of the cancer which is undergoing degeneration, so that it is sometimes necessary to cut sections from various parts of the growth, in order to demonstrate the presence of these bodies satisfactorily. They are not to be found either in the very fibrous parts of cancers, and I have never seen them in cells undergoing karyokinesis, although I have often met with them in the very next cell to that undergoing division. The structure, too, of these bodies is very typical; they are nearly

or quite round, with a nucleus which is always visible in well-prepared specimens, and with a capsule which can also be seen in every instance; from this capsule in a certain number of specimens rays extend centripetally toward the nucleus, and from the nucleus also rays extend radially toward the capsule, these latter being usually fainter and finer than the capsular rays. But these are not seen in every instance, and their significance is as yet undetermined. The size of the bodies varies considerably, even in the same specimen; in one lately under observation I measured some varying between 0.0137 μ and 6.317 μ; and in many specimens small chromatin granules are scattered through the protoplasm of the organism."

PRINCIPLES UNDERLYING THE MODERN TREATMENT OF GONORRHŒA.

An instructive discussion on gonorrhœal diseases took place at the recent International Congress of Dermatology. Professor Neisser, of Breslau, the discoverer of the gonococcus, clearly set forth his views on this subject, and it is worth while to examine his statements in their practical bearings on the everyday treatment of these common disorders.

Neisser first alludes to the prevalence and importance of gonorrhœa, particularly in females. It is not enough that a few specialists should be familiar with its rational management. The general practitioner should thoroughly understand the disease and all its sequelæ and complications, and prophylaxis ought to be attempted on a larger scale than has yet been done.

It is essential to recognize the etiological significance of the gonococcus, and to utilize its discovery in fixing the anatomical seat of the disease. This applies to every stage of the infective cycle. In most cases, more particularly in the subacute and chronic forms, a microscopical examination of the suspected discharges is necessary for a scientific diagnosis. In women, for example, mere naked eye inspection is of no value.

In most cases this microscopical examination of suspected secretions will be found sufficient for purposes of diagnosis. Bacteriological culture-tests are only exceptionally needed.

The great danger of the malady is due to the fact that it does not always remain localized. In man the disease may creep from the deep urethra to the epididymis, prostate gland, bladder, ureters, and kidneys. In women, it is now universally admitted that the uterus, Fallopian tubes, ovaries, and the peritoneal coverings of these organs may be seriously damaged. The virus of the gonorrhœal process may permeate the superficial epithelial coverings of the organs and occasion deep-seated structural alterations. There may thus be smouldering sources of chronic infection in very inaccessible regions. Only in the early stages of the disease, when a superficial infection exists, is it quite amenable to treatment. Early treatment is, therefore, all-important. *Principiis obsta* is the golden rule.

In regard to treatment the following data are to be borne in mind. Use only such drugs as will

a, Kill the gonococci;

b, Increase inflammation as little as possible;

c, Not injure the mucous membrane.

Among the remedies answering these requirements, the following may be mentioned:

Silver nitrate solution, 1 to 4,000, or 1 to 2,000.

Ichthyol, 1 to 100.

Sublimate, 1 to 30,000, or 1 to 20,000.

Pure astringents are not advisable on account of the danger of spreading infection by means of the injections. In the early stages caustics are dangerous, and the endoscope and bougie are to be eschewed.

Early anti-bacterial irrigation is the best therapeutical measure, but, for practical reasons, injections with a good syringe will generally have to be used in men. In women local treatment follows the same principles.

Internal medication is not considered necessary by Neisser, but general measures, such as hygiene and diet, must not be neglected.

The duration of treatment is not to be regulated according to conspicuous immediate results, but should always be mild and continuous. Safety, not rapidity, should ever be the aim of our therapy. In all chronic cases it is essential to ascertain whether gonococci still exist. In men, irrigation or Guyon's instillations will best destroy the remaining virus. If gonococci no longer exist, then the true basis of treatment is found in the discovery of the anatomical seat of the changes which have occurred in the mucous and submucous tissues. Sounds, massage, cauterization, are then called for, according to the nature of the lesion.

Gonorrhœa in women is much less amenable to treatment than in men. Discharges must be repeatedly examined to gauge the success of our therapeutic measures. Recent urethral and cervical gonorrhœa must be treated by prompt and energetic local remedies, for the remote sequelæ are often incurable and call for formidable surgical interference. Finally, Neisser claims that rectal infection is much more frequent than is commonly supposed, and that it is often responsible for chronic ulcerative processes.

We have reproduced the views of this German observer at some length, for they contain suggestions that every physician can act upon, even if the doctrine of the gonococcus is not accepted in its entirety. The most important point, in our opinion, is that which relates to the futility of securing an immediate relief to the most conspicuous symptom of infection, namely the discharge.

What's in a Name?—A midwife in Prussia was recently fined $2.50 for daring to assume the title of Geburtshelferin when she was nothing but a Hebamme. In commenting on the incident, the *British Medical Journal* is led to remark: "That a mere midwife should attempt to pass herself off as an accoucheuse is, as Dogberry says, 'most tolerable and not to be endured;' it is an offence against society like that of Dr. Johnson, of whom Boswell's father spoke in terms of righteous indignation as 'ane that keepit a schule and ca'd it an academy.'"

The Morell Mackenzie Memorial.—A fund is being raised in England to build an extension to the Throat Hospital, Golden Square, which will be known as the Morell Mackenzie wing. The Empress Frederick has subscribed fifty guineas to the fund!

News of the Week.

Journalopathy is the term coined by the *Medical News* to denote an endemic said to be confined to the United States. The chief objective symptom of this condition is stated to be the appearance of an extravagant number of so-called medical journals filled with advertisements, reading notices, uncredited copyings from exchanges, personal notices, portraits of famous living physicians, many abstracts, a few original unpaid contributions (and these mostly the echoings of other voices), and articles on miraculous proprietary pharmaceutic preparations by Drs. Hardpressed & Co. The *News* also asserts that, "In the United States there are something over two hundred such periodicals. In proportion to population, therefore, we have, roughly, between three and four times as many medical journals as England. But even this enormous disproportion is heightened by the fact that, England supplies her colonies and the English-speaking world with much of their literature of this kind."

The National Quarantine Bill is still hanging fire, although Mr. Cockran, of New York, has volunteered to withdraw his amendment prohibiting the relaxation or uspension of any State quarantine regulations. It is possible that this may help the new House Bill through the Senate.

The City Institutions are Overcrowded, says the recent Report of the States Charities Aid Association, through its local visiting committee. The basement room in Bellevue Hospital, occupied by the women who are workhouse keepers is not large enough, and the lodging-house for women is often overfilled. The alcoholic wards are often crowded in the winter. Gouverneur Hospital suffered last winter from defective plumbing, pumps, ranges, baths, and hot-water supply. In January, 1892, the stove in the children's ward was found to be broken, and although there was a case of pneumonia there the ward could not be warmed. Up to November, 1892, the date of the report, the want had not been supplied. The condition of the old wooden pavilion of the Insane Asylum, Blackwell's Island, is deplorable; C and F in particular are liable to fall in any violent wind. The committee conceives the immediately pressing needs of the department to be: At Bellevue Hospital, the completion of the new alcoholic cells. At Gouverneur Hospital, more room for the housekeeping and better water-works. At the Harlem Hospital, better ventilation for the new laundry-building and more room for the dispensary. A steam-launch for the workhouse ferry and proper police protection for it. The carrying into effect as rapidly as possible the plans for the removal and better treatment of the insane. The removal of all misdemeanants from the almshouse.

The New St. Luke's Hospital.—The work on the New St. Luke's Hospital is to be commenced without delay. The new buildings will stand on a tract of land 580 × 530 feet, bounded by Morningside and Amsterdam Avenues, and 113th and 114th Streets. The central administration building, facing south, will be 115 × 60 feet, with four wings, each seventy-five feet square, branching off from the corners. In its rear there will be a large chapel, while a tower seventy-five feet high will add to the architectural beauty. The plans are drawn so that four additional wings can be built when they become necessary. It is expected that the buildings will be ready for occupancy in eighteen months. The style of architecture is modern French Renaissance. Miss E. T. Minturn has offered to the hospital her father's former country seat at Hastings-on-the-Hudson, valued at $75,000, for the purpose of establishing a convalescents' home. The offer is made upon condition that the hospital authorities raise $200,000 by March 1st for an endowment fund.

New Cases of Typhus Fever are occurring from time to time, as might be expected; it has not extended beyond the lodging houses where it started. Tents have been erected in Bellevue Hospital for observation cases, which are in charge of Dr. Blake, of the Health Department.

No Dissensions in the University of Toronto.—The Registrar of the University of Toronto writes: "I am directed by the University Council, consisting of the University Professors in Arts, Medicine, and Law, to say that the statements of your special correspondent, which appeared in your issue of December 24, 1892, and which referred to the existence of dissensions threatening to impair the usefulness of the Medical Faculty of this University, are incorrect. While it may be true, as your correspondent alleges, that the recent Senate elections were conducted with much bitterness, this feeling has not exhibited itself in the staff nor has it in any way interfered with the usefulness or efficiency of the reorganized Faculty."

The Medical Bulletin is the title of "a weekly medical newspaper," published in Chicago, and edited by Dr. Kaufmann.

Honors to Medical Men in France.—MM. Péan, Proust, and Dujardin-Beaumetz, of Paris, have been named Commanders, MM. Guyon and E. Roux, Officers, and Metschnikoff, Netter, Thoinot, and Galliard, of Paris, Gimbert, of Cannes, Heydenreich, of Nancy, Fochier, of Lyons, with several others, Knights of the Legion of Honor.

Cancer-cures from Vienna.—Professor Adamkiewicz has embodied the results of his researches on cancer and its treatment in a work, "Untersuchungen über den Krebs und das Princip seiner Behandlung," which has just been published (W. Braumüller, Vienna). The object of the book is to prove that "cancer cells" are not epithelial cells, and that the inoculation of "cancer cells" in the brain leads to the formation of foci of the disease, and generates a specific poison ("cancroïn"). The author maintains that cancer is due to the action of a parasite, which he identifies as *Coccidium sarkolytus*. By the injection of "cancroïn" into the subcutaneous connective tissue, he claims to have effected a cure in twenty-five cases of malignant disease.

The Wrong Kidney.—The following story, which we give "with all reserve," reveals a situation which is interesting in more than one respect. A rich merchant of Dayton, O., had one of his kidneys removed some time ago by a Cincinnati surgeon. A physician has now, "after a critical examination," come to the conclusion that the sound kidney was removed instead of the dis-

eased organ. The surgeon is said to admit that he has the kidney in his collection of operative trophies, but declines to return it, and the patient threatens an action for its recovery.—*British Medical Journal.*

Posthumous Honors to Villemin.—At the annual public meeting of the Paris Académie des Sciences the Leconte Prize of the value of 50,000 francs ($10,000) was awarded to the representatives of the late Professor Villemin for his researches on the infectious nature of tuberculosis, which M. Pasteur, in announcing the award, describes as the most epoch-making work of our time. The award was announced as "the first homage of posterity."

Mortality in New York State During 1892.—The State Board of Health reports that the total number of deaths in the State for the year 1892 was 130,750, or 20.78 per 1,000 population. In 1891 it was estimated at 21.43; in 1890 and 1889, at 19.65. The infant mortality (under five years) was 33.5 per cent. The zymotic death-rate was 182.87 per 1,000 deaths from all causes; for the first six months, 132.57; for the last six months, 236.34. In 1891 it was 178, and for the five years preceding, 193. Typhoid fever caused 300 fewer deaths than last year. From diphtheria there were 5,918 deaths, or 850 more than in 1891; it has been prevalent during the fall in many scattered localities. Scarlet fever caused 2,177 deaths (2,254 in 1891), and measles, 1,350 deaths (1,200 in 1891). From diarrhœal diseases the mortality was the same as in 1891. Whooping cough caused 921 deaths (825 in 1891). Small-pox prevailed throughout the year in the maritime district, of 143 deaths all but one occurring there. In 1891 there were but four deaths from small-pox. Typhus fever has been limited to New York City. From epidemic influenza (grip), which began in December, 1891, and did not pass entirely away until early summer, 6,000 deaths were estimated to have occurred, and 8,000 including December. From all local diseases there was a large increase in mortality during the grip epidemic. The death-rate from old age was especially large in January. From consumption there were 13,471 deaths. There was one death in every 475.57 of the population, which is about the average for the five years preceding.

Going Backward.—The Missouri Legislature is considering a bill for the substitution of execution by electricity for hanging.

Sanitary Reforms at Nice.—A recent issue of *The British Medical Journal* refers as follows to this subject: "In the earlier part of the year we commented upon a report made by Dr. Wendt for the New York MEDICAL RECORD on the sanitation of Nice, in which he said that of the five springs which made up the Source de Ste Thécle the four chief ones were very good, but that the fifth, called 'La Comtesse,' was not up to the proper standard. The use of this suspected source has been discontinued for several months. Dr. Wendt also animadverted upon the fact that the sewer which runs below the Boulevard Gambetta was allowed to flow over the shore, and that washerwomen could be seen washing their clothes in its water. This is no longer the case. The sewer has been completely canalized and carried out to sea in iron pipes to a depth of fifty feet beneath the sea level. The only other remaining sewer not already dealt with in this way has also this summer been carried out to sea in pipes. The municipality, Dr. Sturge adds, are working with a will to improve matters. Much has already been done, and much is at this present moment being done, but it must necessarily take several years before the old system can be entirely done away with, and new and more perfect systems substituted." It is apparent, thererore, that some of the criticisms made in the RECORD are bearing good fruit on the Riviera.

Banquet of the Society of the Alumni of Bellevue Hospital.—The third annual banquet of this society was held at the Hotel Brunswick on the evening of February 1st. The President, Dr. Wisner R. Townsend, made the opening address of welcome, and acted as toastmaster. The following were the toasts, with their respective respondents: "The Commissioners," by Hon. H. H. Porter; "Old Bellevue," by General James G. Wilson; "The Medical Board," by Dr. Joseph D. Bryant; "The Alumni," by Dr. Charles McBurney; "Medical, and Other Kinds of Doctors," by Frederick Taylor, Esq.; "Our Sister Societies," by Dr. W. L. Carr; "The Patient," by Charles C. Beaman, Esq.

The Medical Century, edited by C. E. Fisher, M.D. and published by Gross and Delbridge, Chicago, is a monthly journal of homœopathy, fashioned very much after the style of the MEDICAL RECORD. It contains many articles interesting to homœopathic physicians, and is ably edited.

The Police and Quackery Abroad.—As affording a striking contrast with home methods of dealing with the sale of patent quack medicines, the following announcement, which appeared in the *Berliner klinische Wochenschrift* may be perused:

"*Notice.*—As a cure against the most varied skin diseases, a Mrs. A. R—— recommends her skin tonic in the daily newspapers. This secret medicine consists of a solution of corrosive sublimate in water, with the addition of some glycerine, and it is slightly perfumed. It is sold in bottles containing about ℥ vj., for the sum of three dollars, while the real value of the bottle contents is about one cent. The above advertisement is hereby given in order to warn the public.—*The President of Police.*"

The New York Academy of Medicine and Federal Quarantine.—At a special meeting of the New York Academy of Medicine, held January 31st, the quarantine committee appointed September 12th offered the following report favoring Federal quarantine, which was unanimously adopted:

"The committee appointed September 12th to investigate quarantine affairs at the port of New York, and the desirability of establishing a National quarantine, beg leave to submit their report:

"The committee has been enabled, mainly owing to its association in an advisory capacity with the Quarantine Committee of the New York Chamber of Commerce, to personally examine into the New York quarantine establishment and its management during a trying period last autumn. The details of our investigation have already been made public, and may be simply referred to here. We found the quarantine establishment at this port utterly insufficient for dealing with any emergency in which more than a single large emigrant passenger ship infected with cholera should present itself. We found that the facilities which did exist, or were extemporized, were not administered in such a way as to inspire confidence.

"In spite of the suffering, inconvenience, and loss

which were inflicted upon citizens and others entering this port, cholera made its appearance in several places in New York City, but a spread of the disease through the city and the country was prevented by the effective measures employed by the Health Department. We felt it our duty, as the result of our observations and inquiries, to express to those whom we were called upon to advise, 'the grave concern with which we looked forward to the coming year, and the probable repetition of the useless personal suffering and commercial losses of the immediate past, if some radical change were not at once instituted in the scope and management of the Quarantine establishment of the port of New York.'

"The interests which centre in this port are not solely, are not largely, local, but national, and we believe that the quarantine here can be most surely made humane, prompt, and efficacious by the establishment of a National system.

"The importance to the country at large of the control of quarantine by the Federal Government is so evident, and the advantages of such a National control are so many-sided and have been recently so much considered, that it does not seem necessary to your committee to rehearse them in detail at this late day.

"The uniformity of system and practice which would be assured by a National quarantine; the large and varied resources, both in trained men and in material, which would be available; the power of rapid concentration of forces at a point of threatened invasion by infectious disease; the avoidance of widespread apprehension and panic which a National administration would favor; the full and direct command of consular assistance and the promise of international co-operation; the concentration of responsibility in a single administrative body; the equable distribution of the expenses of a protective agency in whose benefits all parts of the nation share; the removal of disastrous conflicts in authority, and the suppression of petty local political and pecuniary ambitions, now often openly pursued regardless of the public weal—these are hints of some of the more manifest advantages which a full National control of quarantine seems to promise. In a belief in the importance of the immediate establishment of a National quarantine system, we think physicians and sanitarians in this country are practically unanimous.

"These considerations, taken together with those lamentable deficiencies, both material and personal, in the important quarantine establishment at the port of New York, which led directly to great apprehension and suffering last autumn, seemed to give the assurance that the representatives of the States at Washington would not fail on their assembling to speedily enact such laws as promise the largest measure of relief from the grave danger threatening the health and commercial interests, not of the seaboard alone, but of all the States.

The necessity for such legislation seemed so obvious, and the way by which alone efficiency could be secured so clear, that we have not hitherto felt, as a committee, that a report to the Academy of Medicine of our observations and conclusions was a matter of urgency. But the accounts which come to us regarding the legislative endeavors at Washington in the matter of quarantine regulation excite our gravest apprehension for the welfare of the country at large, and of our own city and neighborhood.

"In expressing to you our conviction of the importance of the immediate establishment of a National quarantine, we wish therefore to lay great stress upon the necessity for such legislation as shall secure a protective system for this country placed immediately and completely under Federal control.

"We wish to express our conviction—a conviction founded not upon hearsay, but upon searching and prolonged personal observations—that to place serious reliance upon the present local quarantine at the port of New York, or upon any establishment which at this late day the State, under existing conditions, would be likely to create, or upon any establishment whatsoever which relies for its administration upon any man or men not known to be possessed of large experience, sound judgment, executive ability, and wide knowledge of modern sanitation, is simply to invite disaster.

"The New York quarantine establishment is to-day, as it was in August and September of 1892, utterly inadequate to afford reasonable security against the invasion of Asiatic cholera in the coming year.

"We have sought in vain for any assurance that the pitiful and disgraceful scenes of the last autumn would not be repeated. And we cannot regard it as wise to rely again upon that fortunate combination of external assistance and good luck which alone apparently prevented the addition of pestilence to the disgrace which the New York State Quarantine brought upon the United States.

"In expressing these convictions we are not striving to cast blame upon individuals, but to call attention to the deficiencies of an existing system of alleged protection against infectious disease, which seems to us radically wrong in principle and fatally defective in fact. We do not think it necessary to attempt to picture the extent of the calamity which an epidemic of Asiatic cholera in this country in the coming season would involve. But we wish to call attention to the fact that there are in this country not a few cities and towns which are still supplied with sewage-polluted waters, and are thus inviting a repetition—in what degree we cannot predict—of the scenes which Hamburg lately witnessed as a result of similar neglect. We think we voice the nearly universal conviction of physicians and sanitarians in this country in expressing the belief that the sanitary conditions and general sanitary knowledge in the United States do not justify the abolition of a rigid quarantine control of all ports and places of entry. We wish again to express our conviction that no measure of quarantine supervision which does not unite, and unite without delay, under one responsible authority the forces which modern science has shown to be most efficient and least harmful in preventing the spread of infectious disease, can at this juncture be regarded as satisfactory, safe, and wise.

"Your committee, finally, looking forward with the gravest apprehensions to the advance of the Asiatic cholera to our shores in the season that is now almost at hand, recommend the New York Academy of Medicine to memorialize Congress to give us the only relief that seems to us possible, namely, a National quarantine that is paramount to all others.

"The responsibility at this time that rests upon the medical profession of this great city cannot be exaggerated. The health of our citizens and of the inhabitants of our land is not, and cannot be, adequately protected by existing quarantine facilities. We urge the appointment by the Academy of a committee of its members, with power to take such action as they may deem necessary to secure such legislation as will most effectively protect this city and the country at large from the invasion of cholera.

"A. Jacobi, M.D., *Chairman*; Stephen Smith, M.D.; T. M. Prudden, M.D.; E. G. Janeway, M.D.; A. L. Loomis, M.D.; A. McLane Hamilton, M.D.; Richard H. Derby, M.D., *Secretary*."

In accordance with a resolution offered by Dr. T. G. Thomas, to the effect that the Academy appoint a National Quarantine Committee to protest against the present quarantine bill, and prepare a suitable substitute therefor, the following gentlemen were appointed, the President of the Academy, Dr. Roosa, being subsequently added to the list: Drs. T. G. Thomas, A. Jacobi, Stephen Smith, T. M. Prudden, E. G. Janeway, R. H. Derby, L. A. Sayre, C. C. Lee, Laurence Johnson, A. H. Smith, Daniel Lewis, C. L. Dana, J. H. Girdner, W. T. Lusk, C. C. Rice, T. M. Markoe, M. Allen Starr, S. B. Ward, C. McBurney, David Webster, and E. B. Bronson.

Society Reports.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, January 23, 1893.

CHARLES CARROLL LEE, M.D., PRESIDENT, IN THE CHAIR.

Cancer of the Cervix Uteri Complicating Pregnancy.—DR. H. C. COE read the paper. That cancer of the cervix did not necessarily prevent pregnancy was emphasized by the fact that its occurrence was common enough to give rise usually to no comment. Indeed, he believed that under certain circumstances incipient epithelioma of the cervix actually favored conception in those long sterile by determining a flow of blood to the uterus and favoring receptivity by the endometrium. Another equally well-known fact was the rapid growth of existing malignant disease after the puerperal period and the greater frequency of the affection in those who had borne several children in rapid succession and had cervical erosion. He had seen several cases of epithelioma of the cervix in young women in the hospital only a few months after the last pregnancy, the degenerative change in the cervix having already become extensive. There had been no reason in these cases for supposing the malignant disease had existed before pregnancy. The practical management of cases of cancer of the cervix complicating pregnancy differed somewhat in private from that in hospital practice. In the former concessions had to be made and methods of procedure modified in a manner that would be inadmissible in a maternity. An illustrative case was that of Mrs. E——, an actress, married fifteen years, never pregnant until after she had developed epithelioma of the cervix, pronounced to be such by Dr. Reynolds, of Boston, in 1890. Dr. Coe first saw her in April, 1891, when pregnancy had advanced to about four months and a half. She was then in good health, able to attend to her professional engagements, no discharge, except occasionally a slight show. The cervix was hard where previously operated upon, and bled easily to the touch, and Dr. Reynolds advised abortion, to be followed by an operation, but as the patient was anxious for a child, Dr. Coe acceded to her wishes, let pregnancy progress, seeing her from time to time. Meanwhile cleanliness and iodoform constituted the principal treatment. Dr. Coe explained to her the possible dangers of labor owing to cicatricial tissue in the cervix. Acting upon a plan he had before decided upon, he did not wait after labor began for dilatation, but introduced Barnes' bags to soften the cicatricial ring, after which labor proceeded normally, a living child being born. The woman was up on the tenth day. Strict aseptic precautions had been taken before, during, and after labor. Four weeks later the uterus had undergone perfect involution, the cervix only showed slight cicatrices, and both he and Dr. Reynolds began to question the previous diagnosis of malignant disease. Her local and general condition remained good until the spring of 1892, when she wrote that she was flowing freely and her general health had begun to suffer. She was advised to return, and Dr. Coe performed vaginal hysterectomy. She was discharged in four weeks, and at present was in good health and showed no evidence of a return of the malignant disease.

Some cases in the practice of others were cited, statistics showing the large maternal and infantile mortality given, together with some of the rules of practice which had been suggested. There was no question, Dr. Coe said, that when a woman with cancer of the cervix became pregnant the fact was to be greatly deplored. The patient should be warned of her danger, and if it were within the first three months he would not hesitate to advise amputation of the cervix, although he thought it was better, if the patient would consent, to induce abortion and then operate. He would probably prefer hysterectomy. Abortion did not always follow an operative procedure on the cervix, but it did, as a rule, if the operation were thoroughly done. After the third month he would act as he did in the present case, giving both mother and child a chance, doing whatever might seem indicated during the progress of pregnancy. If at labor there was a cicatricial ring it would be better to employ Barnes' bags for their softening effect than wait and let the woman become exhausted by ineffectual pains. In his case he was prepared to make multiple incisions had it proven necessary, as had been recommended by others, but he wished to avoid it if possible because of the risk of infiltration, etc. Charpentier recommended multiple incisions and forceps instead of version. Craniotomy seemed not to have met with favor. If the local conditions indicated that labor involved in a given case great danger to mother and child, Cæsarean section should be performed, and Dr. Coe would recommend it two or three weeks before expected labor. Porro's operation had also been practised. It would be good surgery, he thought, to remove the whole uterus, thus acting in the interests of the mother as well as of the child.

DR. WILLIAM T. LUSK said his own experience had been confined to a single case, the patient being well advanced in pregnancy when he first saw her. The old course had been in such cases to fold the hands and wait until the patient died, or perhaps to make multiple incisions, and still lose mother and child. Then the sharp spoon came to be used for taking away the diseased tissue and making an opening through which the child could be extracted, but when once he looked up the statistics he found no case in which the mother thus treated had recovered, and the infantile mortality was also large. Then Leopold reported four or five cases in which Porro's operation was performed at the end of gestation, and he believed the mothers recovered for a time. In his own case there was advanced carcinoma of the cervix and vagina, and he did Cæsarean section after labor had begun. Perhaps it would have been better had he not waited for the commencement of labor. The patient lived eight weeks after the operation, but was insane during this time. The child still lived, was beautiful, and four or five years of age.

DR. EGBERT H. GRANDIN had seen, among a large number of confinement cases, only one complicated by cancer of the uterus. This patient was already at term, the disease well advanced, and while he was debating what course to pursue the cervix dilated and the woman delivered herself, the child being born alive. He thought that prior to the stage of viability he would urge amputation of the uterus and in the course of a few weeks extirpation of the organ if the disease were limited to the cervix, for the reason that epithelioma was apt to spread rapidly during pregnancy. If the fœtus were viable, he would wait, and if the disease at term were limited to the cervix and there was no reason why dilatation might not take place he would not at once interfere. If the disease were higher, he would think strongly of Cæsarean section, having regard only for the fœtus, as the mother would soon die anyway.

DR. H. T. HANKS had had one case, about ten years ago, the epithelioma of the cervix making rapid progress the first three or four months, then advancing less rapidly to term. He simply met emergencies as they arose. The child lived; the mother had a profuse hemorrhage after labor, but lived and died of her disease in about three months. At the Woman's Hospital a patient was submitted to a minor operation for cancer of the cervix, and soon afterward aborted. He performed vaginal hysterectomy on another woman who had been delivered of a child two or three months before by another physician. Each case must be treated according to its merits. He believed impregnation took place oftener than was supposed in malignant disease, and the women aborted without our knowledge.

DR. C. A. VON RAMDOHR thought cases of pregnancy complicating cancer of the uterus were extremely rare.

He had seen but one and did not attend her in labor. Elective Cæsarean section would be preferable to the same procedure at term.

Dr. H. J. Boldt had seen two cases, the cancer in one involving the cervix, in the other the vagina. One aborted. Before the fourth or fifth month he would advise abortion and hysterectomy if the case were suitable for the latter. The location of the disease must have much to do with the treatment.

Practical Data in the Application of Water to Some Intractable Diseases.—Dr. Simon Baruch read the paper (see page 129).

Dr. Mary Putnam-Jacobi said that in water we had a type of almost every other possible mode of medication, and all that need be added in order to mitigate the fanaticism of certain uneducated water therapeutists was that water did not go far enough to meet all the indications. She was pleased to learn that this means of treatment was taking so firm a hold in New York City. There was a superstition among some of the laity and physicians that the cold bath was too exciting to the nervous system and that it required great strength of will to brace one's self up to taking it daily. Where persons felt so badly after the beginning of cold water treatment it was due, she thought, to excitement of the vaso-motor nervous system out of proportion to the excitation carried to the spinal centres with consequent contraction of the vessels and insufficient blood-supply to bring about reaction. The same influence was probably exerted on the brain, causing the intensely wretched feeling from which the patient suffered. It would seem that where heat was first applied the blood vessels on the surface were mechanically dilated so that the subsequent application of cold would not cause exhaustion of the cerebro-spinal centres. She supposed that in Bright's disease the benefit of hot water was to be explained by its causing dilatation of the blood-vessels on the skin and not by direct action upon the kidneys. She asked Dr. Baruch his opinion of forbidding patients with commencing uric acid diathesis the use of cold water, allowing only hot water, as had been advised by Dr. Weber, of London, whether it was not merely afancy.

Water in Nervous Diseases.—Dr. Frederick Peterson was particularly in favor of hydrotherapy in nervous and mental diseases. In melancholia no agent was quite so thorough as prolonged warm baths, and in the motor excitation of acute mania nothing equalled the hot pack. It was much better than the straight-jacket and injections of hyoscyamia.

Water and Electricity.—Dr. A. D. Rockwell endorsed Dr. Peterson's remarks on the great value of water in nervous diseases. He referred to its mechanical value by intestinal irrigation in chronic constipation, and said that the paralysis of peristaltic action which this treatment, long continued, induced could best be counteracted by the stimulating effect of electricity to the bowel, bipolar method, current of quantity. The current of intensity had marked effect on the skin and little on the mucous membrane; the current of quantity had marked effect on the mucous membrane, causing contraction of the muscular coats, and little influence on the skin. Again, the galvanic current on the skin produced its strongest influence at closure, while on the mucous membrane it acted more strongly at opening.

Dr. Charles C. Ransom's experience with the water treatment at Richfield Springs had shown its great efficacy. It had been of special benefit in cases of neurasthenia from business worry and insomnia. The aversion to the cold bath in the morning was usually due to its improper management. The patient should immediately on coming out of it be covered and reaction be secured.

Dr. Baruch made some closing remarks, and impressed the necessity of reaction after the bath. One should not speak of cold and hot bathing to the patient, but state the exact temperature.

Watching the Legislature.—At the recommendation of the Medical Society of the County of Erie, the Society adopted a resolution memorializing the Legislature to pass no bills having for their object a change or modification of the medical laws of the State until they had been duly recommended by the Regents of the University and medical profession as represented in the incorporated medical societies.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Annual Meeting, January 16, 1893.

S. B. W. McLeod, M.D., President, in the Chair.

Reports of Officers and Committees.—The reports were read by the Corresponding and Statistical Secretary, Dr. Augustus D. Ruggles. There was a balance in the treasury of $119; the entire expendituruures for the year having been somewhat over $1,400 There had been a greater increase of membership than during any previous year; the number joining the past twelve months having been two hundred and two. The total active membership at present was eight hundred and seventy-one. The issuing of a "Directory" had given satisfaction and elicited a vote of thanks.

Election of Officers.—The following named gentlemen were elected to office: *President*, S. B. Wylie McLeod; *Vice-President*, Benjamin F. Vosburg; *Recording Secretary*, P. Bryenberg Porter; *Corresponding and Statistical Secretary*, Augustus D. Ruggles; *Treasurer*, John H. Hinton; *Member of the Executive Committee*, Neil J. Hepburn.

Digestion and Digestive Ferments.—Dr. G. T. Hunter, read the paper (see page 138).

Digestive Ferments Should be Used Only Temporarily.—Dr. J. Hilgard Tyndale thought digestive ferments should in no case be used more than temporarily while restoring the alimentary tract to as nearly as possible its normal condition. The physician should always remember that he had in each case to deal with a single individual, and in trying to improve nutrition should look after his condition from the teeth to the anus, and not treat the stomach alone. It was the custom when he was a student to give in nearly all cases what was called "ten and ten," in order to "clear the deck." That meant to give a cathartic and render the intestinal tract as nearly aseptic as it could be done before giving other remedies. Dr. Tyndale recommended this procedure, although when younger he condemned it as a relic of old fogyism. Never used pepsin or pancreatin for months in succession.

Dr. Valentine said he had also failed of success with papoid, but that in 1879 he wrote an article giving some results with carica papaya, and found that the juice would digest diphtheritic membrane, rendering breathing easier, but it had no curative effect on the disease.

Dr. Hunter had employed this agent also and had obtained no result. Perhaps it was not fresh enough. He would try again.

Hæmaturia, if alternating with clear urine several times a day, is of renal origin, for this never happens, Guiard says, in tumors of the bladder. If the first drops passed are the most blood-colored it is not only probable that the bleeding takes place from the bladder, but that the neoplasm is situated near the neck. If the last drops are the most bloody it simply permits us to locate the origin in the bladder; the contractions at the end of micturiton increasing the hemorrhage.

The Bacillus of Pemphigus Neonatorum.—Dr. Almquist has discovered a microbe in six instances in the bullæ of epidemic pemphigus. It occurs as a coccus always identical and resembling slightly the staphylococcus aureus. Inoculations always produced, after a short period of incubation, typical pemphigus bullæ.—*Arch. f. Derm. u. Syph.*, No. 2, 1892.

NEW YORK PATHOLOGICAL SOCIETY.

Anniversary Meeting, January 11, 1893.

H. P. Loomis, M.D., President.

Hemorrhagic Pancreatitis. — Dr. George P. Biggs presented specimens from two cases of this very rare condition. He said that a search through the records of the Society showed, that although several cases of necrosis and suppuration had been reported, there had been only one case of hemorrhagic pancreatitis, and this was reported in 1853, and the description was rather defective.

The first specimen which he presented had been found yesterday at an autopsy on a German laborer, thirty-two years of age, who had been taken suddenly, at 2 P.M., January 6th, with intense pain in the right side, at the junction of the right inguinal and lumbar regions. Shortly after this he began to vomit. Previous to this attack, he had been in good health, although a heavy drinker. When admitted to the Chambers Street Hospital, at 2.42 P.M., he also complained of severe pain in the epigastric region; his pulse was rather slow, the temperature 100° F.; the abdomen very rigid and somewhat distended. Palpation revealed nothing. He had been drinking heavily for two days. A diagnosis was made of perforating appendicitis with acute general peritonitis, and an operation was advised, but consent was withheld until too late. His pulse soon became rapid and feeble, vomiting of bile was frequent, and he tossed about the bed, holding his hand over the seat of pain. He had been somewhat constipated. Death occurred twenty-four hours after the onset of the pain.

The autopsy was made after a delay of two days, but in the interval the body was frozen. Much to the surprise of those who had seen him during life, there was no peritonitis, the vermiform appendix was perfectly normal, and with the exception of the pancreas, nothing was found in the organs except changes due to alcoholism—fatty liver, and a moderate amount of chronic nephritis. The intestines were filled with a large quantity of mucus, which contained the usual amount of bile. In the location of the pancreas a very dark mass could be seen through the peritoneum: this proved to be the pancreas enlarged to three or four times its normal dimensions, and its head projecting considerably to the right of the spinal column, displacing and compressing the duodenum. It was 16 ctm. long and about 6½ ctm. transversely and vertically. The entire organ was of a reddish-brown color, and to the naked eye presented no trace of pancreatic tissue, looking like one large, firm clot. Scattered through this mass were very dark spots, probably the site of older hemorrhages. The layers of fat between the layers of the mesentery were also extensively infiltrated with very dark blood, the infiltration extending down the sheath of the left psoas muscle. There was no fluid blood at any point. A probe could be easily passed through the duct of the pancreas. No microscopical examination had yet been made.

The second case was also in Chambers Street Hospital. He was a German laborer, forty-five years of age. Nothing could be learned of his previous history except that he had been intemperate in his habits. Two days before his death there was a gradual development of dyspnœa and pain in the epigastrium. There was vomiting, but it was not so severe as in the first case. The dyspnœa was the most marked symptom, and was so severe that he was obliged to sit up in bed with the hands over the abdomen. His pulse was very rapid and feeble. He died two hours after admission to the hospital. On account of the short time he was in the hospital, no accurate observations were made of his condition.

At the autopsy the pancreas was found considerably increased in size, measuring 20 ctm. in length, by 6 ctm. vertically, and 4 ctm. antero-posteriorly. The entire organ was of a brownish black color, and to the naked eye no distinct pancreatic tissue could be seen. In this case there was extensive infiltration of the dark blood into the surrounding cellular and adipose tissue, and in addition to this, behind the peritoneum, between the tail of the pancreas and the diaphragm, there were about a pint and a half of fluid blood. This was the main point of difference between this and the former case. Some of the hemorrhage seemed to be old, as the sections under the microscope showed considerable black pigment. They also showed extensive destruction of the pancreatic tissue, and extensive fatty change in the portion still remaining.

The history in the first case is that usually given. Fitz, in his paper read before this Society in 1889, reported seventeen cases of this condition, which he had been able to collect, and the appearances he described correspond to those just reported. Virchow recently spoke of it as one of the rarest conditions found on autopsy. Both patients were well-developed men, with much adipose tissue, and this was also noticed in most of the cases reported by Fitz.

Dr. Hodenpyl asked if there was a history of syphilis, and whether or not there were lesions of the blood-vessels elsewhere.

Dr. Biggs replied that, owing to the unavoidably imperfect history, he could not speak definitely about the existence of a syphilitic history, but there were no lesions of the blood vessels, and the hemorrhage was almost exclusively into the interstitial tissue of the organ.

Fractures of the Skull and Symptoms of Insanity.—Dr. Biggs then presented a specimen from an autopsy made a few days before, on a man who had been committed to the Bloomingdale Asylum as insane. Thirteen days before death the man was found wandering around the streets, and unable to give an account of himself. No history could be obtained. There were no signs of injury. He was taken to one of the hospitals of the city, and, as he had been drinking heavily, his condition was supposed to be largely due to alcoholism. He was in the hospital several days, during which time he imagined himself back at his work, and tried constantly to get out of bed. He was then transferred to Bellevue Hospital, and there pronounced insane. His friends had him transferred from the Insane Pavilion to Bloomingdale Asylum, where he died rather suddenly. No positive diagnosis had been made, but the case was supposed to be one of general paresis. One of the orderlies stated that he had noticed that the man moved his right arm and both legs without difficulty but did not move the left arm. The autopsy showed a fracture of the skull, beginning about one inch above the external auditory meatus on the right side, and running downward and forward. There was a large extra-dural clot, three and one-half inches in diameter, and one inch thick; there was no fluid blood. The clot produced lateral compression of the temporosphenoidal lobe on the right side; the leg centre was not involved. The only other changes found in the organs were those due to alcoholism. The case was of interest on account of the error in diagnosis, and the length of time elapsing between the receipt of the injury and death.

Obstruction of the Bowels by Pelvic Adhesions.—Dr. Biggs also presented a specimen showing changes following chronic pelvic abscess. It was removed from a woman, thirty five years of age, who had been tapped twice through the vagina, and pus evacuated from the cul-de-sac. She did well for a time, but finally returned to the hospital, greatly emaciated, and apparently suffering from pulmonary tuberculosis. There was also intestinal obstruction. The autopsy showed no tuberculosis of the lung, but extensive bronchitis and pulmonary œdema. The large intestine was found to be enormously distended, evidently from an obstruction in the rectum. The uterus was small, and there were extensive adhesions from the upper border of the uterus directly backward to the rectum, completely closing off the portion of the pelvis below this, and in this mass of tissue behind the uterus was an old abscess cavity filled with pus. Both Fallopian tubes near the uterus were quite small, and the

canal could not be followed; but the outer portion of the tube was considerably dilated, and a probe could be passed from the dilated tube out through the fimbriated end into the abscess cavity. The visible cavity measured 3 by 2 ctm., and communicated with another abscess passing across behind the uterus.

It was interesting to note that the origin of the trouble was tubal. A firm band of fibrous tissue, nearly half an inch thick, surrounded the middle portion of the rectum, causing so much obstruction that it was with difficulty that the little finger could be forced through the opening. Above this point there was very marked dilatation of the gut, and in the sigmoid flexure and ascending colon there was very extensive diphtheritic inflammation.

Tubercular Ulceration of the Vermiform Appendix.—Dr. E. Hodenpyl presented a specimen showing one result of an attack of appendicitis. The patient was a young man who died in the hospital from acute phthisis. There was no history of appendicitis. The appendix measured about six inches in length, was twisted on itself, and entirely shut off from the abdominal cavity by old adhesions containing some blood-vessels. The appendix was almost the size of the little finger, and on the inner surface, and about the orifice of the appendix, were ulcerations which, on examination, proved to be tubercular. There were no other ulcers in the intestines; in fact, no lesion in any of the other abdominal organs. There was no foreign body in the appendix.

Perforating Ulcer of the Stomach.—Dr. Hodenpyl also presented a specimen from a woman, twenty years of age, who had suffered from various gastric symptoms of moderate severity for about one year previous to her death. The day before her admission to the hospital she ate a very hearty meal, and almost immediately complained of severe pain in the epigastrium, which was soon followed by symptoms of general peritonitis. She was taken at once to the hospital, but died within six hours. At the autopsy an opening was found in the anterior wall of the stomach, near its middle. It was about half an inch in diameter, round, and its edges were considerably thickened. The abdominal cavity contained considerable partly digested food, and there was an intense general peritonitis just beginning.

At a meeting of this Society, last November, there was some discussion as to the frequency of these ulcers, and the conclusion reached was, that they were not so common as the books would lead us to believe; yet, although he had seen very few up to that time, he had met with four such cases since then.

Cerebro-spinal Meningitis.—Dr. W. P. Northrup showed the brain and spinal cord from a child, aged three, on whom an autopsy had just been made. The case was one of cerebro-spinal meningitis, and the chief feature was that the inflammatory lesion was largely in the ventricles. All the ventricles were distended, and contained pus and fibrin. The exudation about the cord was all on its posterior surface; all the fissures of the brain were glued together, and there was a moderate exudation of pus.

The history of the case, which was a rather unusual one for cerebro-spinal meningitis, was as follows:

On December 1st the child was convalescent from measles. During the night there was a chill, followed by vomiting, with great restlessness, and in the morning the temperature was 105° F., the pulse was 140, the respirations, 58, and the face and throat were congested. An examination of the lungs was negative. On the following day the morning temperature was 104° F., there was some ulceration of the throat and tonsils, and some tenderness of the neck. At 12 M. the temperature was 107.8° F.; respirations, 44, and the pulse, 159 On December 5th the respirations were irregular, the temperature was 103.6° F., the head was retracted, and there was tenderness about the neck and whole body, and the child had a shrill cry. On December 10th the temperature was 107.8° F., the stupor was increasing, there was strabismus and twitching of the face, and irregular respirations. No opisthotonos was present, which seems rather remarkable in view of the fact that the exudation extended the whole length of the cord, and was on the base of the brain. On December 16th the temperature was 105° F., the child was very irritable, and the reflexes were entirely abolished. On December 26th it was noted that there had not been much change. On January 1st there were vomiting and diarrhœa, incontinence of urine and fæces, and the temperature was 103° F. On January 9th the child died, and the temperature just before death was 108.6° F. There were no convulsions, no paralyses, no opisthotonos, and no eruption.

Sarcoma of the Anterior Mediastinum.—The President presented a specimen of this condition. It was taken from a young Bohemian, who was admitted to Bellevue Hospital on December 24th. During the ten days he was there he was examined by a number of the visiting staff, but no diagnosis was made. There were two prominent symptoms—severe and persistent nasal hemorrhages and a high temperature. For the greater part of the time the temperature was 103° F., but once or twice it reached 106° F. He was greatly emaciated and very anæmic. No definite history could be obtained. There was slight glandular enlargement on one side of the neck, but no pressure symptoms. There were no physical signs excepting a blowing murmur over the heart. The autopsy was made thirty hours after death, and on removing the sternum, a smooth and hard mass was found filling up the anterior mediastinum, extending from just above the supra-sternal notch downward over the pericardium. It was not adherent, and on opening the pericardial sac no connection could be found between the mass, which was attached firmly to the parietal portion of the pericardium, and the heart itself. The vessels were not obstructed. The mass proved on examination to be a small round-cell sarcoma. There were no other growths found.

An examination of the literature of the subject showed that such sarcomata were quite rare. Only 2 cases have been reported in this Society since 1885, and the records of the London Pathological Society for the past fifteen years show only 8 cases of sarcomata of the mediastinum—5 of lympho sarcoma, 1 round-cell, and 2 spindle-cell sarcomata. The most exhaustive monograph on this subject is that of Hare, of Philadelphia. His conclusions, from the 520 cases which he collected, are as follows: Cancer is more frequently found in the mediastinal spaces than any other morbid process. Abscess is the next most frequent; then, in the order of their frequency, come sarcomata and lymphomata. Most mediastinal growths occur in adults, and more frequently in males. Cancer and sarcomata in these spaces are always fatal. Abscesses are recovered from in about forty per cent. of the cases. One hundred and thirty-four of these tumors were cancer, 98 were sarcomata, 115 were abscesses, 21 lymphomata, 7 fibromata, 6 hæmatoma, 11 were dermoid cysts, and 8 were hydatids.

In conclusion, we may say that mediastinal tumors are commonly situated in the anterior mediastinum. Almost all sarcomata in the mediastinum are primary; when secondary, it is usually due to sarcoma of the pleura; they invariably enlarge backward, and not forward.

Dr. J S. Ely asked if the President had formulated any theory to account for the temperature.

The President replied that he thought in his case it might have been a so-called "anæmic temperature." In a very similar case reported to the London Pathological Society, mention is made of an elevation of temperature, and it was explained on the theory that there was a complicating pleurisy.

The Society then went into executive session.

The following officers were elected: *President*, Dr. H. P. Loomis; *Vice-President*, Dr R. H. Sayre; *Secretary*, Dr. O. C. Ludlow; *Treasurer*, Dr. John H. Hinton; *Editor*, Dr. George C. Freeborn.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE LETTSOMIAN LECTURES AT THE MEDICAL SOCIETY OF LONDON—DR. BRISTOWE ON SYPHILIS—THE ACTION OF IODIDES ON ARTERIAL TENSION AND THE EXCRETION OF URATES—THE NEW SCHEME FOR THE RECONSTITUTION OF THE LONDON UNIVERSITY.

[LONDON, January 14, 1893.

THE annual course of "Lettsomian Lectures" at the Medical Society of London was commenced on Monday last by Dr. Bristowe, F.R.S., who selected as his subject "Syphilitic Affections of the Nervous System." Dr. Bristowe said syphilis must be regarded as a specific infective disease, due to the invasion and proliferation of specific living organisms, and having manifest relationships with other specific infective diseases—especially with small-pox, tuberculosis, and cancer. The main difference between small-pox and syphilis was that small-pox was almost completely self-protective, the virus being entirely eliminated and the disease showing no tendency to relapse. Cancer resembled tertiary syphilis in its mode of progress. As to tuberculosis, though the contagium of tubercle was liable to become generalized, as were the contagia of small-pox and syphilis, it was to a large extent a local disease, and remained localized, though the potentiality to assume an aggressive character after an indefinite period remained. He held that the specific lesions of syphilis in all its stages, as well as of congenital syphilis, were all irritative or inflammatory growths determined by the actual presence of the specific living organism.

Syphilis was more apt than most diseases to be complicated and obscured by other disorders and to be followed by sequelæ which, though having no specific connection with it, had been largely, and still were sometimes, regarded as essential parts of it. Erysipelas, phagedæna, and hospital gangrene were formerly frequent accompaniments of primary syphilis, and were not uncommon complications now. But these were not truly syphilitic, but were due simply to the accidental inoculation of the local sores with other pathogenic organisms. Similar accidents were apt to attend the so called ratural cow-pox as it appeared in the cow: hence the local lesions in that affection not uncommonly presented much virulence of inflammation—a phenomenon which had misled scientific anti-vaccinators into the belief that the original cow-pox was a virulent and untamed malady and that the occurrence of similar accidents in ordinary vaccination was due to the tendency of cow-pox to revert to its supposed original malignancy. By sequelæ he meant morbid conditions due to damage inflicted on regions or tissues by the direct influence of the specific poison, and remaining over as it were after the specific element had died out.

That syphilis was usually imparted by inoculation of the sexual organs was in a sense an accident, due largely to the fact that the primary sore was not in all its stages, or necessarily, a cause of serious discomfort to its owner or preventive of sexual congress, and that in the act it became freely applied to a delicate, readily inoculable mucous surface. If the local manifestation of cow-pox extended over so long a period as a chancre did, and was attended with as little intensity of inflammation, there was no reason why cow-pox might not be perpetuated as a venereal disease.

The lecturer attributed the difference in the specific proclivity to attack certain tissues which distinguished the secondary and tertiary stages to changes in the relative sensibility of the soil, due to the protective or modifying influence exerted over the tissues during the former stage. He held further, that the distinctive features of inherited syphilis were due in different degrees to the operation of the same cause, to differences of vulnerability of the fœtal tissues as compared with these of the adult, and to interference with the developmental changes which were going on in early life. He believed that any tissue, the seat of an active syphilitic process, might convey the infection to others, and quoted two cases which he thought constituted a weighty indictment against the innocence of tertiary syphilis.

At the last meeting of the Medical and Chirurgical Society Dr. Haig read a paper on "The Effects of Iodides on Arterial Tension and the Excretion of Urates." He said he believed that iodides must be added to the list of substances which diminished the excretion of urates, and that the action of these substances on the solubility and excretion of urates would explain a large part of their value and utility in medicine and surgery. One of the laws governing the excretion of urates and water was that first formulated by him, viz., that, other things being equal, arterial tension varied with the uric acid that was circulating in the blood. Another was that from day to day and from hour to hour in physiological conditions, the urinary water varied inversely as the uric acid excreted along with it. Another was that in physiological conditions the excretion of urates in the urine varied inversely as the acidity of the urine. And another, that the amount of urates in the urine was, relatively to the urea, to a certain extent an index of the amount of urates passing through the blood. It followed from these that arterial tension varied with the amount of uric acid that was being excreted in the urine. But arterial tension meant contracted arterioles, and contracted arterioles meant that water had difficulty in passing the kidneys, as was shown to be the case in the parallel action of digitalis and other drugs which contracted the arterioles, and this was why the urinary water varied inversely as the uric acid. The diuretic action of iodides was well known, and the author showed some figures which demonstrated that at the time an iodide was causing diuresis it was also causing a diminished excretion of urates, and that the one was the cause of the other. The figures also showed the inverse relation of urates and water in excretion; also that under the influence of iodides the excretion of urates ceased for a time to bear its usual inverse relation to acidity. Some twenty drugs, or rather groups of drugs, all diminished the excretion of uric acid in the urine, and also at the same time produced relaxed arterioles, lowered arterial tension, and diuresis. Iodides could be classed along with these drugs, and Dr. Haig maintained that their action on the solubility of urates, and so on the contraction of arterioles, enabled us to explain all their most important effects in physiology and pathology. He referred in conclusion to his previous writings on uric acid as a cause of high arterial tension, and suggested that there was no possible explanation of the parallel action of all these drugs, except that which he had given, viz., that urates contracted the arterioles all over the body, and raised arterial tension, while the absence from the blood-stream, however produced, allowed these vessels to dilate. The action of iodides on arterial tension was thus completely explained by their influence on the solubility and excretion of urates.

Dr. George Harley remarked that in cases of gout, where colchicum could not be borne, iodide of potassium often gave marked relief.

Sir William Roberts said the results of his experiments had led him in the opposite direction to Dr. Haig. No statement as to the solvency of uric acid could apply also to urates. It was chemically impossible for uric acid to exist free within the body. He knew of nothing which affected the solubility of the biurates in the blood-serum; rendering the serum more alkaline diminished its solvent power. He doubted whether uric acid covered the whole field of gout, and believed that if uric acid were altogether eliminated a pathological entity would still remain and be recognizable as gout.

Dr. Sansom said that, while admitting the marvellous power of the iodides in reducing intra-arterial tension, he

regarded this as brought about rather by a nervous mechanism than by an action on the fluids of the body. Arterial tension required for its production not only contracted arterioles, but the action of the left ventricle of the heart.

Dr. Haig, in reply, said that as to the proneness of people to increased uric acid production, he doubted whether there was really increased formation, but thought it was rather that they retained more uric acid in their bodies. The production of uric acid was entirely due to the taking of meat. If there were a minus excretion then gout would follow, but if there were a plus excretion calculus might form. He had proved that the headache might be made to vary with the amount of uric acid in the body. Nitrite of amyl and nitro-glycerine took seven or eight minutes to produce their maximum effect on arterial tension, and this allowed time for them to act chemically on the blood.

A new scheme for the reconstitution of the University of London has been prepared by the annual committee and is to be submitted to convocation on Tuesday next. In it there is no proposal to modify the existing examinations, but the establishment of a system of university teaching is advocated. University professoriates are proposed to be set up and the University professors may be appointed from the teaching staff of the colleges. The professoriates may be endowed from the funds of the university on condition that the appointment to such chairs, whenever a vacancy occurs, should pass to the University. A federal university, however, is not contemplated, and the teaching is not to be delegated by the University to the constituent and affiliated colleges and schools as corporations.

ELECTRODES.

To the Editor of the Medical Record.

Sir: In the Medical Record for January 14, 1893, there is an article by Dr. Sanders, describing an electrode made of felt, etc. This probably makes a very serviceable article; but it seems to me to be a little expensive, somewhat hard to make, and, for indiscriminate dispensary use, not easily kept clean. Felt, especially the cheaper grades, such as is used to cover steam-pipes, etc., is not a very cleanly article, and does not take up water very readily, being something like sponge in this respect.

As the dispersion of electricity—or, in other words, the conductivity of the electrode—depends, not on the felt, sponge, or other material with which the electrode is covered, but rather on the amount of fluid it is able to hold in its meshes (as all these materials are non-conductors when dry), it follows that any substance of equal bulk, holding an equal volume of fluid, and arranged as efficiently as to surface contact, will be just as efficient as felt, or other covering.

Absorbent gauze will hold about as much water as any other material, bulk for bulk, and a little more than some, as clay, punk, etc. It is cheap, easily applied, and can be changed sufficiently often for cleanliness. Felt is very dirty, sponge is about as bad, and both get worse by using.

I constructed for my own use some electrodes on the absorbent gauze principle. They work as well as, or better than, sponge, and give entire satisfaction. Their other qualities are cheapness and cleanliness, and they are easy to make. A few yards of plain absorbent gauze will cover a large electrode. The construction is simple. A piece of thin annealed copper, zinc, tin, or other material of proper size, is used, and to this is attached the binding-post, either by screw or solder, in a convenient locality. Several thicknesses of plain, absorbent gauze, long enough to go round the electrode three or four times, laid one on the other, are then folded into a strip a little wider than the length of the electrode. The metal is wrapped in this gauze, as a package would be wrapped, but the edges should not be turned in; these project about one quarter inch beyond the metal. With a pair of scissors, snip away the gauze over the binding-post, allowing it to protrude. Run a row of stitches where the last lap of gauze ended, or secure with safety-pins. If pins are used, place them on the back of the electrode, so that they will not touch the flesh of the patient. The edges projecting beyond the edge of the plate can be stitched or not. Thus the plate is entirely covered, except the binding-post; a rubber pad can be placed over the back, but it is not necessary. The whole thing is finished in a few minutes. When it is to be used, dip in warm water and apply. The gauze absorbs water readily.

For a round or oval plate a sufficient number of layers of gauze must be cut to shape, allowing about one-quarter inch larger than the plate all around. Place the plate between the layers of gauze, and stitch around the edge. The electrode can be made thick or thin to suit the fancy by using many or few layers of gauze. As water is quite cheap there has been no device added to prevent evaporation. Wet it when again needed for use.

Nowadays nothing seems to be of utility unless aseptic. Although this electrode was not designed with that object in view, still I think it will fill all requirements in the line of complete asepsis, if so desired.

Very truly yours,

C. B. Longenecker, M.D.

3501 Hamilton Street, Philadelphia, Pa.

THE MODIFIED GOTTSTEIN'S CURETTE.

To the Editor of the Medical Record.

Sir: In the Record of September 3, 1892, I gave a description of "A Modified Gottstein's Curette," and recommended its use in the removal of adenoids. I did not claim that it was my modification, as will be seen from this quotation from my article:

"A somewhat similar instrument was recently shown by Professor Adam Politzer, of Vienna, at a meeting of aurists in London, but, so far as I know, this shape has not been used in this country." It is, perhaps, superfluous for me to say that I did not know at that time that a heart-shaped curette had been before described. In fact, it is only within a fortnight that I found, in looking over the article "Diseases of the Pharynx," etc., in the "Annual of the Universal Medical Sciences," 1892, vol. iv., that Dr. Hicguet, of Brussels, had, in the *Revue de Laryngologie, d'Otologie et de Rhinologie*, November 1, 1891, given a description of his heart-shaped curette. I certainly have no desire to "father" any instrument that another is deserving the credit of originating, and I must beg leave to state that I had not read Dr. Hicguet's description, either in the *Revue de Laryngologie, d'Otologie et de Rhinologie*, or in the *Journal of Laryngology and Rhinology*, of London, August, 1891. Further, Dr. Hicguet, in his communication to the Record, of January 21, 1893, entitled "A Modified Gottstein's Curette—A Question of Priority," says that I was mistaken in stating that Politzer showed a curette at a meeting of aurists in London.

In the May number, 1892, of the *Journal of Laryngology, Rhinology, and Otology*, of London, p. 199, it is stated that on Monday, April 4th, at the house of Sir William Dalby, were assembled a number of metropolitan aurists, and that Professor Politzer was present, and on the following page, in a list of instruments shown by the professor, is an improved Gottstein's curette, "somewhat heart-shaped." I supposed that this was his own modification, as I had seen an instrument in his clinic in Vienna which I presumed to be the same one.

Further, unless I am very much mistaken, this instrument was not so pronouncedly heart shaped as the one I described in the Record of September 3, 1892, the depression in the middle of the blade not being so abrupt; this, of course, is a matter of degree, and not of principle.

I am very sorry that anyone should have interpreted my article as invading another's domain or as making any claim for credit where it was not due.

Yours very truly,

CARL E. MUNGER, M.D.,

Late Clinical Assistant Manhattan Eye and Ear Hospital, Throat Department, New York.

WATERBURY, CONN., January 25, 1893.

LOCALIZATION OF REMEDIES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Dr. J. Leonard Corning's paper of December 31st on the "Localization of the Action of Remedies upon the Brain by Intra-nasal Medication and Compression of the Internal Jugular Veins," while containing valuable suggestions as to method of compression, I think is open to criticism.

First, I would mention that it is wrong to suppose that the habit of cocaine or morphine may not be contracted by intra-nasal medication, and it is unwise to use such remedies, temporary in character, to the treatment of chronic cerebral or nervous disease.

Again, for anatomical reasons, there can be no difference, so far as the circulation is concerned, whether the medicine enters through the cerebral veins or other veins of the body equally remote from the heart, as in either case before an impression can be made upon the cerebral tissues, by means of the circulatory apparatus, the medicine must first be carried to the heart and then sent out by the arterial circulation.

Admitting that more profound and often dangerous effects are noticed by the use of the drug cocaine upon organs contained in the various skull cavities, it can be explained only through the reflex nervous system, not by the circulation.

JOHN WOODMAN, M.D.

123 EAST TWENTY-FIFTH STREET, NEW YORK,
January 25, 1893.

ŒSOPHAGEAL STENOSIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Some eight or ten years ago I wrote you an account of a case of this accident, caused by an attempt to swallow a peach-pit, which became fixed in the gullet. It was in the case of a stout man, sixty or more years of age, who was the patient of a neighboring physician, who came to consult me about it. I advised him to give an enema of an ounce of the fluid extract of lobelia inflata, in ten ounces of warm water, and repeat, if necessary, until emesis was produced. He did so, and in a few minutes the patient vomited out the peach-pit, to the great relief of the doctor as well as of his patient. Seeing an account in your journal of two or three similar cases in which operations were resorted to with fatal results, induces me to again call the attention of your readers to this simple but effectual mode of relief in all similar cases. There is no danger in it, or attending it; and if it fails, the operation may be resorted to as well after as before this treatment. The medicine relaxes the œsophagus, and the vomiting rushes the obstruction out in a handsome manner. I do not believe that any surgeon can be justified in performing such an operation without first trying this remedy.

Very respectfully yours, etc.,

J. S. PRETTYMAN, M.D.

MILFORD, DEL., January 25, 1893.

Creosote in twenty-five per cent. and guaiacol in ten per cent. solution in sterilized olive or sweet almond oil, or liquid vaseline are used for subcutaneous injection in pulmonary tuberculosis by Dr. Eloy on account of their rapid absorption. Congestion, hæmoptysis, renal lesions, and pyrexia are given as contra-indications.

Therapeutic Hints.

Migraine may be relieved, Lucking says, with a pill, twice daily for some time, consisting of Indian hemp one-sixth grain, phosphide of zinc one-tenth grain, and arsenic one-thirtieth grain. The severity of the attack may be effectually diminished with liquor trinitrinæ in minim doses two or three times daily.

Bromidism may be prevented, Féré claims, by an intestinal antiseptic being combined with the bromide salt, as in the following:

R.	Potassii bromid	ʒ ss.
	Beta naphthol	℈j.
	Sodii salicylat	℈ss.

for each dose, which is considered curative as well as preventive.

Bryonia has been recently employed in whooping-cough, where it is found to diminish tracheo-bronchitis, but not to shorten the course of the pertussis. The dose is one grain per day for a child of seven years. Huchard finds it a valuable hydragogue cathartic in doses of three grains of the powdered drug.

Pruritus in Urticaria is relieved by Quinquaud with the following solution:

R.	Boric acid	30 parts.
	Chloralhydrate	5 parts.
	Distilled water	180 parts.

Antipyrin as a local anæsthetic has been studied by Saint-Hilaire (*Bul. de la Soc. de Laryng.*, No. 15, 1892). A concentrated solution produces complete anæsthesia in a rabbit's eye lasting an hour or two. It may be used in the throat where prolonged insensibility is desirable after the following formula:

	Antipyrin	gram 4.
	Aq. dest	gram 10.
	Hydrochlorate of cocaine	gram 0.15.

Epilepsy cured by Pasteur's antirabic fluid, with great mental improvement, after a ten days' treatment, is reported by Dr. Achille.—*Gaz. deg. Osp.*, No. 87, 1892.

Delirium Tremens.—Dr. Kerr thinks the poison should be eliminated by giving drachm doses of liquor ammonii acetatis.

Sozoidal of Mercury, containing thirty-one per cent. of mercury and thirty-eight per cent. iodine is recommended by Witthauer in one per cent. ointment dusting powder or emulsion; the latter is an injection for tubercular fistulas.

Vegetable Albumin, or the commercial aleuronat, a dry yellow powder without taste or odor, is recommended by Ebstein in the diet of diabetics.

Eczema of the Vulva.—Lusch gives the following formula.

R.	Tinct. opii.	
	Sod. bicarb	āā gram 8.
	Potass. bicarb	gram 4.
	Glycerin (neutral)	gram 6.
	Aq. dest	gram 260.

Benzo-Naphthol is recommended by Ewald, in doses of two to five grains daily, for the relief of fermentative changes in the intestines, especially of old people. It is not acted upon in the stomach.

Resorcin in chemically pure ten per cent. solution, applied to the peri-laryngeal mucous membrane by means of an applicator in form of a thick brush of fine hairs, is said, by Moncorvo, to abort an attack of pertussis in twenty-four hours and cure the disease inside of two weeks. Applications are to be made every two or three hours. In severe cases antipyrin in daily quantity of from one to three grammes are given at the same time as well as inhalations of pyridine.—*Ann. de la Polic.*, June, 1892.

Dermatol, suspended in plasment, has been used by Vaughan (*New York Medical Journal*, No. 18, 1892), in strength of three to five per cent. as an injection through a catheter in acute urethritis. He concludes: 1. That in the treatment of acute urethritis soothing applications rather than irritants should be used. 2. That the passage of the soft rubber catheter recommended does not, as a rule, irritate the urethra; that if it does it should not be used. 3. That plasment is an excellent vehicle for urethral medicaments. 4. That dermatol in plasment is the most efficacious drug he has used in urethritis, although he has used no other drug in plasment. 5. That treatment by the above-described method has produced a milder course and fewer complications than that with other remedies that he had used.

Salipyrine gives Dr. Taherlet more decisive results than antipyrin or the salicylates, and has no disadvantages. It seems to have its chief use in neuralgias.

Subacute Cystitis.—Desnos dissolves about six per cent. of salol in retinol, and finds that when from one to eight drachms are used the drug remains in the bladder even after several acts of urination, and gives speedy relief.

Pneumonia.—Dr. Reed (*Therapeutic Gazette*, No. 3, 1892) says the wet pack, or bath (Brand method), is the most effective measure in acute rheumatism. Veratrum viride or aconite is the best drug in the first stage, and digitalis in the second. A combination of one of these cardiac sedatives with opium and diaphoretics is also advised in the first stage, and if begun very early and repeated at short intervals may abort the process.

Perityphlitis treated in early stages by leeching, mercurial ointment containing belladonna, small blisters, calomel and opium, and gentle laxatives has generally recovered in the practice of Revilliod (*Rev. Méd. de la Suisse Rom.*, No. 6, 1892). Perfect quiet on the back is indispensable.

Turpentine in typhoid fever is coming more and more in favor with the newer generation, though with many older practitioners it has been the drug upon which the greatest reliance has been placed. Wood regards it as invaluable where, in convalescence, symptoms point to slowness in healing of the ulcers, or where, in the second week, there is decided tympanites.

Antiseptic Treatment of Pulmonary Phthisis is thought by Delthil to be physiologically indicated, and that non-toxic, antiseptic, gaseous mixtures, such as the essential oil of turpentine, containing iodoform or iodine, are useful. These are certainly absorbed, and the urine shows the presence of iodine carried by the essential oil.

Removal of the Posterior Half of one of the inferior turbinated bones by galvano-cautery, in a case of Grave's disease, resulted in immediate improvement in all the symptoms, and Müchold (*Rev. de Laryng.*, July, 1892), who observed it, thinks reflex disturbances may possibly occasion the disease in rare instances.

Hiccough is said to be quickly relieved by an infusion of pilocarpus leaves made with five parts of leaves to two hundred of water and taken freely.

Hot-air Baths are given in chloro-anæmia by Traugott. Twenty to forty are about the number required. They can be arranged for patients in bed by spreading rubber or oiled cloth over hoops, and introducing heated air from a zinc lined box at the foot of the bed in which several spirit-lamps are burning.

Vomiting of Pregnancy.—Routh claims that applying to the cervix and canal equal parts of iodine, iodide of potassium, alcohol, and water, will arrest this troublesome symptom.

Hay-Asthma is reported cured by Dr. Blair with the fluid extract of euphorbia pilulifra.

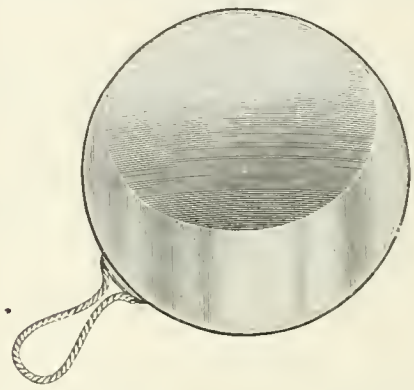
New Instruments.

CILIARISCOPE.

By H. DAVISON SCHWARZSCHILD, M.D.,

ASSISTANT SURGEON MANHATTAN EYE AND EAR HOSPITAL, ETC., NEW YORK.

The author enjoyed the opportunity, in one of the Paris clinics, of observing an attempt to examine the ciliary region; the apparatus employed was defective in many respects, and did not succeed in its purpose. It is his desire, therefore, to present to your attention a perfected instrument, to which he has applied the name of ciliariscope. This consists of an apochromatic sphero-prism, which is held at its focal distance diametrically opposite the portion of the ciliary region to be explored, the base



being always placed toward the pupil, which should be widely dilated. Illumination is furnished by the ophthalmoscopic mirror (reflecting the light of an argand burner), either accommodation is required or a + 3D. or + 4D. lens must be inserted in the aperture. Upon looking through the ciliariscope an inverted, displaced, aërial image is obtained of the ora serrata and of the pars ciliaris choroidæ.[1] The idea suggested itself in consequence of the difficulty—I may state impossibility—of examining the ora serrata and ciliary ring with the ophthalmoscope either by the direct or indirect methods.

It is unnecessary to enter into the physiology of the ciliary processes, as it is sufficiently well understood; however, a few words as regards the pathological changes should be mentioned. Constitutional diseases, such as gout, tuberculosis, and lues, which attack the retina and choroid, likewise affect the corona ciliaris. This is not at all remarkable when we consider that the latter is merely an anterior prolongation and amalgamation of these membranes.

The severer forms of cyclitis and cyclo-choroiditis, with well-marked subjective and objective symptoms, do not require so close an examination as do those wherein an element of obscurity exists; it is in these latter cases that the ciliariscope will be found especially useful.

All non-traumatic lesions of the ciliary circle are pathognomonic of their etiology, *e.g.*, an inflammation presenting pigmentation, or atrophy, or both, is of specific origin, exudations are tuberculous, hemorrhages, gouty.

In cases of keratitis, iritis, choroiditis, retinitis, or optic neuritis, the characteristic lesion of the ciliary ring denotes the etiology.

For the purpose of diagnosticating obscure ophthalmic diseases, observing miliary hemorrhages the result of traumatism, the extension of tumors, and the position of foreign bodies in the eye, this method of examination is invaluable.[2]

72 East Sixty-first Street.

[1] Extract of paper read by the author before the Academy of Medicine, Ophthalmological Section, November 21, 1892.

[2] The author is indebted to Messrs. Ga Nun & Parsons, the opticians, who have constructed the instrument under his directions, for their kind co-operation.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 28, 1893.

	Cases	Deaths.
Typhus fever	30	8
Typhoid fever	11	5
Scarlet fever	154	13
Cerebro-spinal meningitis	8	9
Measles	78	8
Diphtheria	98	22
Small-pox	6	0
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

Why Surgeons are better Paid than Physicians.—In a recent address Dr. Montgomery spoke as follows, with reference to this point (*Pacific Medical Journal*): "It is a matter deeply to be regretted that the services of a physician can never, from the nature of things, be so well paid as those of a surgeon. The services of a physician are less obvious, less ostentatious, less full of dramatic effect, and the world has been willing in all ages and in all countries to pay for dramatic effect. Furthermore, a surgeon can say, 'It is necessary to perform an operation to cure you. The operation requires skill and experience, and it will cost so and so much' And he can add that 'people being always more willing to pay for what they expect than for what they have had, you will please pay the fee before the operation is performed.' A physician is unable to do this." Touching the subject of lawyer's fees the following views are expressed by the same writer: "A lawyer naturally tries to get all he can for his services, and a judge is usually inclined to allow a lawyer's demand, for, as Bryce says: 'The judge who has recently quitted the ranks of the bar remains in sympathy with it, respects its views, and desires its approbation.' A physician, seeing his legal friend's success, makes a request before a tribunal for a comparatively modest fee, only to see it cut down. It is all nonsense to say, as many lawyers do, that it requires a peculiar kind of talent, the legal mind, to be a lawyer, and that its rarity is the sole reason they receive, and justly, such enormous fees. All pre eminent mental work is the result of aptitude in a particular direction, and if legal talent is the best paid it is because of some of the following reasons: They often make their bargains before commencing suit; having won, they often have the money in their hands and can attach their portion of it; and, best of all, the judge, whose word is practically final, and who is the only uncontrolled power in the commonwealth, is a lawyer, who, with our elective judiciary, may shortly be practising himself."

"Black Death" Following Cholera.—An official report of the Governor-General of Turkestan, which has recently been published in St. Petersburg, states that that province has been severely visited by an epidemic of "black death," which followed on the footsteps of cholera. It appeared suddenly at Askabad, and in six days killed 1,303 persons in a population of 30,000. "Black Death" has long been known in Western Asia as a scourge more deadly than cholera or the plague. It comes suddenly, sweeping over a whole district like a pestilential simoon, striking down animals as well as men, and vanishes as suddenly as it came, before there is time to ascertain its nature or its mode of diffusion. The visit here referred to was no exception to this rule. After raging in Askabad for six days, the epidemic ceased, leaving no trace of its presence but the corpses of its victims. These putrefied so rapidly that no proper post-mortem examination could be made. The Governor-General gives some details as to the symptoms and course of the disease, which, though interesting as far as they go, do not throw much light on its pathology. The attack begins with rigors of intense severity, the patient shivering literally from head to foot; the rigors occur every five minutes for about an hour. Next an unendurable feeling of heat is complained of; the arteries become tense and the pulse more and more rapid, while the temperature steadily rises. Unfortunately no thermometric readings or other precise data are given. Neither diarrhœa nor vomiting has been observed. Convulsions alternate with syncopal attacks, and the patients suffer intense pain. Suddenly the extremities become stiff and cold, and in from ten to twenty minutes the patient sinks into a comatose condition, which speedily ends in death. Immediately after he has ceased to breathe large black bullæ form on the body, and quickly spread over its surface. Decomposition takes place in a few minutes.—*British Medical Journal.*

Concentrated Solution of Boric Acid.—A saturated aqueous solution of boric acid, prepared at ordinary temperatures, contains, as is known, approximately four per cent. of the acid. To prepare more concentrated solutions, Scholtz and Mansier recommend the addition to the mixture of boric acid and water, before boiling, of 1¼ gm. of calcined magnesia for every 10 gms. or fraction thereof beyond the normal quantity of 40 gms. per 1,000 gms. of water. The calcined magnesia may be replaced by the carbonate of magnesium, according to Ploux, who suggests the preparation of a stable solution—containing 100 gms. of boric acid in a litre of solution—as follows:

Boric acid	100 parts.
Magnesium carbonate	11 parts.
Water	1,000 parts.

Even a twenty per cent. solution of boric acid can be prepared, thus:

Boric acid	200 parts.
Magnesium carbonate	35 parts.
Water	1,000 parts.

—*Merck's Bulletin.*

External Genitals of a Woman on a Man's Back, almost fully developed, and with the greater lips somewhat separated, covered with black hairs, and with smooth rosy, humid internal surface having the appearance of mucous membrane, is the condition reported by Dr. Tsortsis (*Jour. méd. de l'Armée*, July, 1892). When separated these parts disclosed a small cavity showing the entrance to a vagina, and at the superior angle a small lenticular tubercle, probably representing the clitoris. There were no small lips, and the only secretion found was that of sweat.

Complications and Early Death after Severe Burns.—Silbermann's observations lead him to these conclusions: 1. After severe burns not only is there an alteration in the shape of the red blood corpuscles, but there is also diminution of their vital properties, shown by their changed reaction to desiccation, heat, compression, salt solution, staining, etc. 2. These changes and the presence of broken up corpuscles result in the formation of numerous thrombi, occluding vessels, and causing stasis in various internal organs, especially in the lungs, kidneys, intestines, liver, brain, and subcutaneous cellular tissue. 3. These points of occlusion of vessels, which are most numerous and striking in the branches of the pulmonary artery, are formed during life. 4. There results therefore considerable obstacles to the emptying of the right ventricle, with consequent general venous stasis and corresponding arterial anæmia. 5 These conditions produce hemorrhages, ulceration, and parenchymatous changes in various organs. 6 Thus may be explained, as occurring after severe burns, dyspnœa, cyanosis, coma, smallness of pulse, various lung affections, convulsions, anuria, and lowering of the body temperature. 7. The fatal result from comparatively limited

burns in children may be due to (1) the more intense action of heat upon the corpuscles owing to their thinner skin; (2) the weaker resisting power of their corpuscles; (3) the comparative weakness of their heart and circulation generally.—*Virchow's Archiv*, Bd. cxix.

Light in the Sick-room.—Dr. B. W. Richardson says that a custom still prevails, despite all our sanitary teachings, that the occupants of a sick-room in the private house should be kept at all times in a darkened room. Not one time in ten do we enter a sick room in the daytime to find it blessed with the light of the sun. Almost invariably, before we can get a look at the face of the patient, we are obliged to request that the blinds be drawn up, in order that the rays of a much greater healer than the most able physician can ever hope to be, may be admitted. Too often the compliance with this request reveals a condition of the room which, in the state of darkness, is almost inevitably one of disorder everywhere; foods, medicines, furniture, bedding, misplaced; dust, stray leavings in all directions. In brief, there is nothing so bad as a dark sick-room. It is as if the attendants were expecting the death of the patient. And if the reason for it is asked, the answer is as inconsistent as the act. The reason usually offered is that the patient cannot bear the light; as though the light could not be cut off from the patient by a curtain or screen, and as though to darken one part of the room it were necessary to darken the whole of it. The real reason is an old superstitious practice, which once prevailed so intensely that the sick, suffering from the most terrible disease—small-pox, for instance—were shut up in darkness, their beds surrounded with red curtains during the whole of their illness. The red curtains are now pretty nearly given up, but the darkness is still credited with some mysterious curative virtue. A more injurious practice really could not be maintained than that of darkness in a sick-room. It is not only that dirt and disorder are results of darkness—a great remedy is lost. Sunlight is the remedy lost, and the loss is momentous. Sunlight diffused through a room warms and clarifies the air; it has a direct influence on the minute organic poisons—a distinctive influence which is most precious—and it has a cheerful effect on the mind. The sick should never be gloomy, and in the presence of the light the shadows of gloom fly away. Happily, the hospital ward, notwithstanding its many defects—and it has many—is so far favored that it is blessed with the light of the sun whenever the sun shines. In private practice, the same remedy ought to be extended to the patients of the households, and the first words of the physician or surgeon on entering the dark sick-room should be the dying words of Goethe: "More light! more light!"—*The Druggists and Chemists' Gazette.*

Increased Consumption of Alcohol in France.—During the last forty years the consumption of alcoholic drinks in France has, according to some startling figures recently published, increased threefold. In 1850 the rate of consumption was about 1½ litre per head; in 1869 it had risen to 2½; and now it is 4½, or a little more than 7½ pints. The rate of increase has been particularly rapid since 1888. The drink-shops have multiplied at a corresponding rate, especially during the last fifteen or twenty years. In 1869 there were in the whole of France 365,878 establishments licensed for the sale of intoxicating drinks; that number has now grown to over 448,000, which is at the rate of one drink-shop per 87 inhabitants. The nature of the beverages used has also changed considerably for the worse, for whereas hardly anything but wine used to be drunk, now brandy, absinthe, gin, etc., are largely consumed, with results which have been only too truly depicted by M. Zola in "L'Assommoir" and others of his works.—*British Medical Journal.*

Pronounced Anæmia without demonstrable cause is said by Dr. Rochford to be strongly suggestive of concealed tuberculosis.

BOOKS RECEIVED.

A Manual of Clinical Ophthalmology. By Howard F. Henshell, M.D., and James H. Bell, M.D. 12mo, 231 pages. Illustrated. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $1.75.

The Diseases of Children. By Henry Ashby, M.D., and G. A. Wright. Second edition. Edited by W. P. Northrup, M.D. 8vo, 773 pages. Illustrated. Longmans, Green & Co., New York. Price, $5.00.

Notes on the Newer Remedies. By David Cerna, M.D. 12mo, 177 pages. W. B. Saunders, Philadelphia, Pa. Price, $1.25

Syphilis and the Nervous System. By W. R. Gowers, M.D. 12mo, 131 pages. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $1.00.

Faith-Healing Christian Science and Kindred Phenomena. By J. M. Buckley, M.D. 12mo, 308 pages. The Century Co., New York.

Disease in Children. By James Carmichal, M.D. 12mo, 591 pages. D. Appleton & Co., New York. Price, $3.00.

Alcoholism and its Treatment. By J. E. Usher, M.D. 12mo, 151 pages. G. P. Putnam's Sons, New York. Price, $1.25.

The Anatomy of the Peritonæum. By Franklin Dexter, M.D. 12mo, 86 pages, and 38 plates. D. Appleton & Co., New York. Price, $1.50.

A Handbook of the Diseases of the Eye and their Treatment. By Henry R. Swanzy, A.M. Fourth edition. 12mo, 518 pages. Illustrated. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $3.00.

The Coal-tar Colors. By Theodore Weyl. Translated by Henry Leffmann, M.D. 12mo, 154 pages. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $1.50.

A Pocket Medical Dictionary. By George M. Gould, M.D. 16mo, 317 pages. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $1.00.

Ringworm. By J. Compton Burnett, M.D. 16mo, 126 pages. Boerick & Tafel, Philadelphia, Pa.

Fermentation, Infection, and Immunity. By J. W. McLaughlin, M.D. 12mo, 240 pages. Austin, Tex. Price, $2.50.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. H. White, M.D. Edited by R. W. Wilcox, M.D. 12mo, 607 pages. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $3.00.

A Handbook of Pathological Anatomy and Histology. By Francis Delafield, M.D., and T. Mitchell Prudden, M.D. Fourth edition. 8vo, 715 pages. Illustrated. William Wood & Co., New York. Price, cloth, $6.00; sheep, $7.00.

Text-book of Nervous Diseases. By Charles L. Dana, M.D. 8vo, 524 pages. Illustrated. William Wood & Co., New York. Price, $3.25.

A Text-book of Practical Therapeutics. By Hobart Amory Hare, M.D. Third edition. 8vo, 696 pages. Lea Brothers & Co., Philadelphia, Pa.

The Diseases and Deformities of the Fœtus. By J. W. Ballentyne, M.D. In two volumes. Vol. I. 8vo, 252 pages. Illustrated. Oliver & Boyd, Edinburgh. Price, 10*s.* 6*d.*

Handbook of Massage. By Emil Kleen, M.D. Translated by E. M. Hartwell, M.D. 8vo, 316 pages. Illustrated. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $2.75.

The Anatomy and Surgical Treatment of Hernia. By Henry O. Marcy, M.D. 4to, 421 pages. Illustrated. D. Appleton & Co., New York. Price, $15.00.

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DIPHTHERIA AND OTHER PSEUDO-MEMBRANOUS INFLAMMATIONS—A CLINICAL AND BACTERIOLOGICAL STUDY.

SECOND PAPER.

BY WILLIAM HALLOCK PARK, M.D.,

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THOUGH there are many interesting points in the subject of pseudo-membranous inflammations still needing further study, it is nevertheless true that the knowledge already obtained is far in advance of its practical application.

Outside of a few hospitals for infectious diseases, the great value of bacterial cultures in making an early diagnosis, and the great difference between the two classes of pseudo-membranous inflammations, are but little appreciated.

The chief aims sought, in continuing the combined bacteriological and clinical examination of such cases as those recorded in this paper, have been to test by a second series, at a different season of the year, the conclusions already formed and published,[1] and to endeavor to simplify the methods and shorten the time needed for the bacteriological diagnosis, and thus make it of more practical value to physicians.

Before proceeding to the consideration of the present studies, it will be useful to review the results of four recent investigations, in which large numbers of cases of suspected diphtheria were examined.

These were made by Baginsky,[2] in Berlin, Martin,[3] in Paris, by Koplik [4] and by myself,[5] in New York. Three of these studies were undertaken in the diphtheria wards of hospitals, where the endeavor was made to examine every case admitted; the fourth series of cases, Koplik's, was from dispensary classes.

Broadly considered, the results of these studies agreed in a remarkable manner.

In Baginsky's 154 cases clinically diagnosticated as diphtheria, there were 34 in which no Klebs Loeffler bacilli were found in the pseudo membranes; in these the streptococci and staphylococci were present. In 200 cases of suspected diphtheria in children, Martin found in 72 no Loeffler bacilli; 29 of these were laryngeal cases.

Koplik in 30 cases found 17 in which no Loeffler bacilli were present. Some of Koplik's cases, in which the Loeffler bacilli were present, showed little or no exudate or pseudo-membrane, and thus were of great interest from the diagnostic stand-point. One of these, in which the appearance and symptoms scarcely suggested diphtheria, was the source of the infection of another with diphtheria which proved fatal.

In the writer's series, 159 cases were examined, in which the clinical diagnosis of probable diphtheria had been made. One hundred and forty of these cases were uncomplicated. Nineteen were complicated with scarlet fever. In the 140 uncomplicated cases the Loeffler bacilli were present in 54, usually associated with streptococci, and often with other bacteria. In all the remaining 86 cases some form of streptococci were abundant, and often these were the only bacteria present. In the 19 cases complicated with scarlet fever, the Loeffler bacilli were present in only two, and in these they were associated with streptococci. In the remaining 17 cases streptococci were present in almost pure cultures.

The mortality in my cases in true diphtheria was forty-six and one-half per cent., in the streptococcus pseudo-membranous inflammations five and two-thirds per cent. In Baginsky's cases the mortality in true diphtheria was thirty-eight and one-fifth per cent.; in uncomplicated coccus pseudo-diphtheria no per cent. In all four series, in a considerable number of cases, the diagnosis was found to be impossible without the aid of cultures.

The division of pseudo-membranous inflammations into two classes still seems to some clinical observers to involve certain objections and difficulties. Some of these are so frequently brought forward that it will be well to discuss them somewhat in detail.

1. The great clinical similarity of many of the cases of diphtheria and pseudo-diphtheria is an objection frequently advanced to their separation into two groups. (Here, as formerly, the name diphtheria is given to all cases caused by the Klebs-Loeffler bacilli; the name pseudo-diphtheria to all cases caused by streptococci, or possibly other cocci.)

When we consider, we find no reason for surprise that there is a great clinical similarity between the less marked cases of both divisions. Both the Loeffler bacilli and the streptococci produce redness and swelling of the mucous membrane, and both have a tendency, though in different degrees, to produce exudates and pseudo membranes.

We have the further fact that many pseudo-membranous inflammations are examples of mixed infection. In these the Loeffler bacilli, the streptococci, and often other probably saprophytic cocci, grow together, and so intimately are they mingled that often the smallest particle of exudate will contain the different forms. In some of the milder cases the streptococci may be more abundant than the Loeffler bacilli, and in these the symptoms and lesions may be largely due to the streptococci. In this connection it may be suggested that, in some of the more malignant cases many of the symptoms, such as the swelling of the tissues of the neck, the fetor of the membrane, and the fever may be due to the bacteria associated with the Loeffler bacilli.

The above facts indicate some of the reasons why the more severe streptococcus inflammations may resemble the less marked cases of true diphtheria, especially those of mixed infection, in which the Loeffler bacilli take a subordinate part.

2. The great prevalence of the streptococci, not only in the pseudo-membranes and exudates of pseudo-diphtheria, but also in those of true diphtheria, has caused some physicians to consider that they are the most important factor in all pseudo-membranous inflammations.

In answering this we must consider two things: First, the causes of the prevalence of streptococci; second, the facts showing that the Loeffler bacilli are the real cause of true diphtheria.

Many bacteriological examinations of cases of both acute and chronic inflammations of the throat, and of nearly normal throats, have shown the presence of streptococci and other cocci in the mucous membranes. Thus the streptococci may already exist in

[1] MEDICAL RECORD, July 30 and August 5, 1892.
[2] Berlin. klin. Wochen., February 29, 1892.
[3] Annales de l'Inst. Pasteur, May, 1892.
[4] New York Medical Journal, August 25, 1892.
[5] Loc. cit.

the throat before the infection with the Loeffler bacilli, or they may be directly carried from cases in which both forms existed together in the pseudo membranes. We must keep in mind the fact that, not only do these two forms of bacteria grow well together, but also that, according to the researches of Barbier,[1] the Loeffler bacilli are more likely to infect a mucous membrane when they are associated with the streptococci. The streptococci are known to be usually only a minor factor in true diphtheria, for we have learned that they are only present in some, while the Loeffler bacilli are present in all, cases of typical infectious diphtheria. Further, we have learned that pseudo-membranes, paralysis, and organic lesions similar to those found in human diphtheria, can be produced in susceptible animals inoculated with Loeffler bacilli, but that all of these results do not follow inoculations with streptococci. Finally, experience teaches that many cases in which only the Loeffler bacilli are present, are just as fatal as those in which they were associated with the streptococci.

An illustration from two other diseases may make the previous points clearer. Suppose that in a cholera epidemic one meets with two cases of moderate diarrhœa. From a clinical examination alone, both would be considered simple catarrhal inflammations of the intestines; but on account of the epidemic bacteriological cultures are made of the discharges. Both are found to contain numerous bacteria frequently found in the intestinal discharges of summer diarrhœas; but in the cultures from one there are also many spirilla of cholera asiatica. On this result the diagnosis of cholera is based. And yet in both these cases, the simple enteritis and the enteritis of cholera asiatica, the same symptoms were present, and perhaps the same treatment needed. Both contained similar bacteria, but one had added the spirilla of cholera asiatica.

No one who sees the propriety and great importance of separating those cases of enteritis, in which the spirilla of cholera are present, from all others, should hesitate to separate those throat inflammations in which the Klebs-Loeffler bacilli are present, from all others.

3. The absence or slight development of the pseudo-membrane, and the few symptoms in some of the cases in which the Loeffler bacilli were found, have caused some to deny that they were diphtheria. We have clinical as well as bacteriological evidence that these mild cases are true diphtheria. Those who have seen many of these have met with a considerable number which have given rise to both mild and severe cases in others. Still further, quite frequently, in the same family or in the same asylum, both obscure and well-marked cases occur together.

From the clinical stand-point, therefore, there is no reason to suppose that some of these are diphtheria and others not. On cultures the bacilli from the mild cases grow in the same way as those from the severe cases. When cultures obtained from the mild cases are inoculated in susceptible animals, some indeed cause only local changes, but others produce as serious effects as those taken from malignant cases. We have in diphtheria, as in other diseases due to bacteria, to consider not only the bacteria, but the individual.

4. The moderate contagiousness of the mild cases has caused some to deny that they were diphtheria.

We have to consider that those beyond the age of early childhood, who have little membrane in the throat and slight local and constitutional symptoms, usually avoid soiling their garments and surroundings with their infected saliva or particles of membrane; while on the other hand, both children and adults with large amounts of membrane and intense local and constitutional symptoms, find great difficulty in preventing this spreading abroad of the contagium, and further, from their very illness, have less ability to take precautions. Thus it is that malignant cases frequently spread the disease in spite of all precautions, while mild cases rarely infect others even when but moderate care is taken. The mild cases are dangerous only because, not being regarded as having diphtheria, they are allowed to freely associate with their companions in school or business, and thus now and again communicate the disease to others coming into direct contact with them.

[1] Arch. de Médecine Expér., 1891, p. 68.

The Relation of the Pseudo-diphtheria Bacillus to the Early Diagnosis from Cultures.—It is frequently asked if the occasional occurrence in pseudo membranes of certain bacilli, which appear and grow like the Loeffler bacilli, impedes in any way the early diagnosis of true diphtheria from bacterial cultures.

In making a diagnosis from cultures, all cases are considered as true diphtheria in which the cultures contain colonies of the Klebs-Loeffler bacilli, or of certain bacilli which are identical in growth and appearance, but have little or no virulence when inoculated in animals. These bacilli, called the pseudo-diphtheria bacilli, occur rarely in pseudo-membranes, and their nature is still unsettled, many believing that they are true Loeffler bacilli which have partly lost their virulence. Whether under suitable conditions they ever regain it, is also in doubt. The early diagnosis from cultures merely forces us to do what other considerations would cause us to do voluntarily, namely, to regard as true diphtheria not only those due to undoubted Loeffler bacilli, but also those unusual cases due to a bacillus which is either closely allied to, or a modification of, the Loeffler bacillus. On the other hand, all cases in which the cultures show no bacteria resembling the Loeffler bacilli are considered not to be diphtheria, and with these cases the occasional presence of pseudo-diphtheria bacilli in other cases has no bearing whatever.

Treatment of Pseudo-diphtheria Patients.—Assuming now that our knowledge of the facts in a case warrants us in pronouncing it not to be true diphtheria, to what extent are precautions still necessary?

This is a question of great importance, and it will be well to review a few facts before attempting to answer it. It is important to remember the great number of the cases under consideration, for it is not only those inflammations of the throat which simulate diphtheria which we have to deal with, but also all others due to the same bacteria, namely, most cases of acute pharyngitis, and most acute inflammations of the tonsils, whether with or without exudate or abscess. Investigations have shown that a certain number of persons associated with those having acute streptococcus inflammations of th throat develop similar inflammations.

Though the number of uncomplicated mild cases which seem to have directly acquired the disease from others is considerable, the severe cases are very few. In the one hundred and seventeen uncomplicated cases of pseudo-diphtheria reported by the writer in this and the previous paper, there was only one terminating fatally, in which there was any history whatever of infection from others. There were no others in which there was any history of the existence of other severe cases in the family or among the associates, for months before. Cases complicated with scarlet fever and measles belong to a different class from those just considered.

We have still further the fact that, when these acute inflammations due to streptococci subside, the streptococci usually only diminish in numbers, thus differing from diphtheria, where, with the disappearance of exudate, the Loeffler bacilli also soon disappear. It seems as if a slightly diseased throat offers a fairly good soil for the continued existence of the streptococci. Here they remain indefinitely, usually quiet, but ready to spring into activity when through exposure the mucous membrane becomes in some way altered. Thus in New York, with its changeable climate and infectious dust, very many persons carry streptococci and other cocci in their throats.

Taking, then, these facts into consideration, the great

prevalence of throat inflammations due to streptococci, the frequent presence of streptococci in slightly diseased throats, and the great rarity of obtaining a history of direct infection in the few severe cases met with, it seems to me that only a few precautions are necessary, namely, those having acute streptococcus throat inflammations, with or without pseudo-membranes, should use antiseptic gargles, and should carefully keep from personal contact with young children while the inflammation lasts. The sick should remain at home, but other members of the family need not be restricted in their movements.

The Treatment of Cases while Waiting for the Bacteriological Diagnosis.—This would seem not to need discussion, but for the fact that some physicians of great experience have strangely misconceived the ideas of those urging that use be made of bacterial cultures, and have asserted that it was proposed by the bacteriologists to allow all suspicious cases to be at large without precautions during the time needed for the growth and examination of the cultures. With our present knowledge this would indeed be foolish.

It is just the opposite that is actually urged. All doubtful cases are considered as having true diphtheria, and all necessary precautions are to be taken until the diagnosis is established. During this interval the case is evidently no more and no less suspicious than before. At present many physicians do not use proper precautions in the doubtful cases, and do not report them. If they could obtain a correct diagnosis in a short time, they would be glad to avail themselves of it and act upon it.

A Certain Method for Obtaining an Early Bacterial Diagnosis in Suspected Cases of Diphtheria.—Experience has fully demonstrated that the most certain and the quickest results are obtained when solidified blood-serum tubes are inoculated with the exudate directly after its removal from the suspected throat. For the accurate determination of all the varieties of bacteria present and the exact number of each variety, alkaline glycerine agar used in Petri plates is most desirable, but the purpose here is a more limited one. Solidified egg albumin, which has been recommended by some,[1] has not proved a reliable medium in my trials of it.

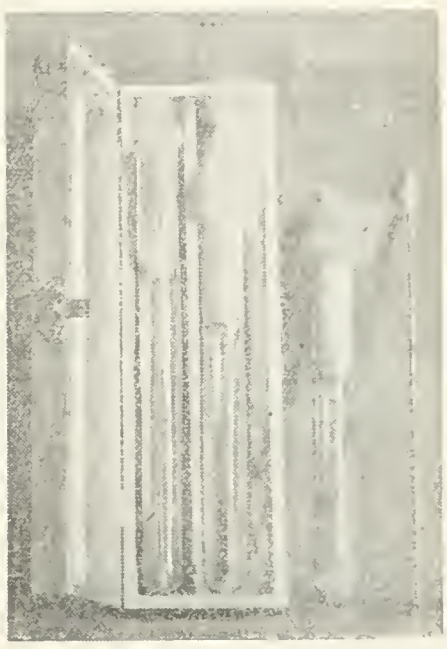
To obtain the material from the suspected throat, small, absorbent, sterile cotton swabs have proved thoroughly satisfactory, being simple in use, not injuring the throat, and always removing sufficient bacteria.

Technique of Preparing the Serum Tubes and the Swabs.—The blood is received directly from the slaughtered sheep or calf into large, thoroughly cleansed preserve-jars, and covered. These jars are put as soon as possible on the ice. After a few hours the jars should be inspected, and if the clot is found adhering to the sides, it should be separated. After twenty-four hours on the ice, the serum is poured off and mixed with one-third its quantity of nutrient bouillon, to which one per cent. glucose[2] has been added. This is poured into test-tubes, which should be about five inches in length and filled one-quarter full. They are placed very obliquely in the serum coagulator, and kept just below 100° C. for one hour on two consecutive days. The tubes with the sterile solidified blood-serum can then be placed in covered tin-boxes and kept for months. The serum prepared in this way is quite opaque, but its value is not lessened for the purpose for which it is intended.

The Swab.—A stiff piece of wire, or, better, a thin steel rod,[3] six inches in length, is roughened at one end by a few blows of a hammer. About this a little absorbent cotton is firmly wound. A number of these are placed in an equal number of glass tubes, the ends of which are plugged with cotton. They are sterilized by dry heat at about 150° C. for one hour, and stored for future use.

For convenience in carrying the tube containing the blood-serum and the tube containing the swab, they are wrapped in a little cotton and placed in a cheap strong pencil-box. Thus fixed they are ready to be carried or sent by messenger or express to the desired place.

To those who may be deterred from undertaking bacteria cultures for diagnostic purposes by the supposed great expense of the incubator, it may be of interest to point out how one may be obtained for less than $7. A large double boiler, such as is commonly used as a cooking utensil, is bought; the outside vessel is perforated near the upper part of the rim by a hole one-half inch in diameter, for the insertion of the mercurial gas regulator into the water; the two vessels are then wired or soldered together and covered with sheet asbestos. The metal cover is lined with asbestos, or replaced by a board to prevent too rapid cooling. The cover is also perforated for the insertion of a thermometer into the air-chamber. The mercurial gas regulator can be bought for $2.50. This is inserted through the



perforation into the lower boiler, which had been previously filled with water. A tripod, a small Bunsen burner, and rubber tubing complete the outfit. I have tested such an extemporized incubator for three months, and found it perfectly reliable. When necessity requires, it can be used at a higher temperature for a serum coagulator.

Directions for the Physician to Use in Inoculating the Tubes with the Exudate.—The patient should first be placed in the best available light, and, if a child, properly held. Taking the swab from its tube, the tongue is depressed and the side of the swab rubbed firmly against any visible membrane, thus catching little particles in its meshes. Without laying it down, it is inserted the full length of the blood-serum tube, and the part of the swab which was previously rubbed against the throat is drawn rather firmly along the full length of the serum surface. It is then reinserted in its own tube for future use in making control cultures. Both tubes, their cotton plugs having been replaced, are put in the box and sent to the laboratory, where the sooner it is received the quicker the diagnosis can be made; still, where delay is unavoidable, twenty-four hours can elapse between the making of the cultures and the placing of the tubes in the laboratory without vitiating the result.

In special cases certain difficulties are met with. When a child is very obstinate, the teeth must be forced open and the swab pushed back till it reaches the pharynx. It

[1] Wyatt Johnson: Medical News, December 10, 1892.

[2] This is according to Loeffler's formula.

[3] A number of rods of the proper thickness can be bought at any large hardware store for a few cents.

is then rubbed against the pharynx and tonsils. In laryngeal cases, and in those in which no membrane is visible, experience shows that reliable cultures can be made if the swab is rubbed against the tonsils and pharynx, since by coughing or other means the bacteria infecting the larynx are always present on the surface of the mucous membrane of the throat. In little children care must be taken not to use the swab when their throats contain food or vomited matter, as when this happens it renders the bacterial examination more difficult.

Technique at the Laboratory.—On receiving the box a second culture on a blood-serum tube is made from the swab. Both serum-tubes are placed in an incubator at 37° C. for twelve hours. They are then ready for examination. On inspection the blood-serum surface will be seen to be dotted with very numerous, just visible, translucent colonies. At this time no diagnosis can be made from simple inspection. A clean cover-glass with a tiny drop of water being prepared, a platinum loop is inserted in the blood-serum tube and a sweep made of a large number of colonies. The bacteria adherent to the loop are washed off in the drop on the cover-glass and smeared over its surface. After drying it is carried through the Bunsen flame three times in the usual way, then covered with a few drops of Loeffler's solution of alkaline methyl blue, warmed, and left for five minutes. The cover-glass is then rinsed off in clean water and either examined in water on the slide, or dried and mounted in balsam.

In the great majority of cases one of two pictures will be seen with the oil emersion lens: either an enormous number of characteristic Loeffler bacilli with a moderate number of diplo- or streptococci, or a pure culture of cocci mostly in pairs and chains. In a few there will be an approximately even mixture of Loeffler bacilli and cocci, and in some with the cocci there will be a moderate number of bacilli in chains or scattered, some resembling a little the Loeffler bacilli, but usually smaller. In not more than one case in twenty will there be any difficulty in making the diagnosis from the first tube. Under these circumstances new tubes and plates must be made.

The endeavor has been made to make an immediate diagnosis by smearing a cover-glass with the swab, drying, staining, and examining. The diagnosis from smears directly made from the throat is much more difficult than from smears from the serum cultures. The bacilli from the membrane are usually less typical in appearance than those in the cultures, and are mixed with fibrin, pus, and epithelial cells; further, we have in many throats bacilli which closely resemble the Loeffler bacilli in appearance.

When in a smear containing mostly cocci a few of these are present we are unable to certainly exclude the diagnosis of diphtheria. Fortunately these bacilli grow slowly, or not at all, on the serum cultures at blood heat, so that they cause no difficulty in the later examination.

In about one-third of a large number examined, the immediate cover-glass smears contained such an enormous number of typical Loeffler bacilli that the diagnosis of diphtheria could be positively made. Although in the rest a pretty accurate guess was possible, I found it usually unsafe to certainly exclude diphtheria. It is much safer to wait twelve hours for the growth of the cultures.

The Certainty of a Diagnosis Depending upon the Early Recognition of the Bacilli in the Cultures.—Many who believe that true diphtheria is caused by the growth and products of the Loeffler bacilli, want to be sure, before they rely on the cultures for diagnosis, that it is absolutely certain that in every case where the Loeffler bacilli exist in the throat they will be shown in the first cultures when made in this way. As a large part of the practical value of these investigations depends on this certainty, I have given it most careful attention.

A very extended trial has convinced me that cultures on blood-serum, made immediately from the fresh exudate on sterile swabs, can be thoroughly relied upon to show a growth of Loeffler bacilli, when these were present and living in the throat at the time of the swabbing, whether visible membrane existed or not.

These investigations, as well as those formerly recorded, were carried out mainly in the diphtheria wards of the Willard Parker Hospital.

In order to thoroughly test the method here described, the following plan was adopted: As each case was admitted, before any treatment was commenced, the throat was swabbed and the tubes inoculated by the resident physician, Dr. Lester, or his assistant, Dr. Blake. The tubes were then sent to me. The next morning those which had been in the incubator twelve hours or longer were examined and the diagnosis recorded. Thus, in the great majority of the examinations I made the bacterial diagnosis before I had any knowledge of the cases from which the cultures came. With a very few exceptions, the inoculations of the tubes with the swabs made by the resident physicians were just as satisfactory as those made by myself.

When cultures are made from cases late in the disease, the presence of the Klebs-Loeffler bacilli in the cultures makes the diagnosis of diphtheria certain, but the absence of the bacilli does not prove that the case had not been diphtheria. Frequently the Loeffler bacilli, which had been present in enormous numbers, disappeared after the fifth day, other bacteria, especially micrococci, replacing them, while ulceration and slight exudation still existed in the throat. Little children may still remain seriously ill with bronchitis and broncho-pneumonia after the Loeffler bacilli have disappeared. These facts are important, and show the necessity of seeking the aid of cultures at the earliest possible moment. In those cases in which irrigation with 1 to 4,000 bichloride of mercury was employed, repeated attempts have failed to obtain Loeffler bacilli from throats forty-eight hours or more after the complete disappearance of the pseudo-membrane. The quick complete disappearance of the Loeffler bacilli from the exudate in throats where bichloride irrigation has been employed, is an important argument for the use of antiseptic irrigation.

A Résumé of the One Hundred and Four Cases Examined in this Series.—*A few Illustrative Cases of True Diphtheria, namely, those in which the Klebs-Loeffler Bacilli were present in the Cultures, either Alone or Associated with Streptococci or other Bacteria.*—1. A typical case where the clinical diagnosis was certain without the help of cultures:

A strong woman, aged twenty, sick two days. On admission, tissues of pharynx, tonsils, and palate swollen and œdematous; whole uvula, tonsils, part of soft palate and pharynx covered by a thick, very adherent, dirty-gray membrane. Much swelling of tissues of neck. Much depressed; temperature, 98° F.; pulse, 100; respiration, 28. Swallowing difficult. Died four days later. Many Loeffler bacilli, many streptococci, and some other bacteria present.

Two adult cases in which the diagnosis would have been doubtful, except for the history and cultures.

2. A well nourished woman, aged nineteen. The day before admission had chilly feelings and felt some prostration. Examination reveals deeply injected and somewhat swollen uvula, soft palate, and pharynx. A tiny patch is on left tonsil, and a suspicion of membrane on posterior pillar. On third day throat clean, but still hyperæmic. Feels well. Temperature varied from 101° to 99° F.; pulse, 110 to 100. An almost pure culture of Klebs-Loeffler bacilli obtained.

Before her admission one of her children had died, and another had been taken sick with, diphtheria. Except for this history, it is doubtful if the diagnosis of diphtheria would have been made clinically.

3. Woman, aged forty. Temperature and pulse about normal. Some prostration. Throat congested. Right

faucial pillar covered by a very thin, soft, grayish smear. On third day throat clean. Nearly a pure culture of Loeffler bacilli obtained.

Ten days before her admission a child, six years old, contracted diphtheria; two days later a baby, three days later two more, and finally herself. Two of the children died.

Two Mild Cases in Children.—A case similar to those commonly diagnosed as simple tonsillitis.

4. A child, aged three and one-half years, was brought to a dispensary with slight sore-throat. The tonsils were slightly swollen, dotted with follicular deposits, a number of which were connected by thin threads of exudate. The mucous membrane adjacent was hyperæmic. The child seemed in usual health. On third day tonsils were clean. The mother persisted in letting the child play with the other children in the street. Cultures gave abundant Loeffler bacilli and some streptococci.

A Mild Case of Diphtheria, probably Contracted at School.—5. Child, aged six. Follicular deposits on pharynx. Slight succulent exudate on posterior right faucial pillar running up as high as margin of uvula. Slight swelling of tonsils and of glands of neck. Has been complaining of pain on swallowing for three days, but feels otherwise nearly well and has continued at school; the child in the seat immediately behind her at school has had a severe sore-throat with exudate for a week. On the fourth day child was well. An almost pure culture of Loeffler bacilli obtained.

Laryngeal Diphtheria without Visible Membrane.—6. Boy, aged six, December 16th. No history of exposure to others with diphtheria. Admitted with marked laryngeal dyspnœa and cyanosis. No membrane visible in throat or nose. Intubation with marked relief. Temperature, 102.8° F.; pulse, 140; respiration, 36.

December 17th.—Tube clogged with thick mucus, removed, and reinserted. Temperature, 103° F.; pulse, 142; respiration, 32.

December 18th.—Tube again clogged, removed, and left out.

December 21st.—Child nearly well. Temperature, pulse, and respiration nearly normal. Cultures, abundant, Loeffler bacilli, some cocci.

A Typical Case in a Child.—7. Girl, aged five. Previous history: A week before, another child in the family was taken sick with diphtheria. Home treatment, swabbing with iron solution and spray from an atomizer. On fourth day of illness the child died. On the same day the patient and a brother were taken ill. The same treatment continued. On sixth day brother was apparently dying and patient was very ill. Both were then sent to the hospital. Brother died shortly after admission. On admission, December 11th, tissues of throat are so swollen and œdematous that it is difficult to see posterior wall of pharynx. Anterior pillars, soft palate, and all parts behind covered with a thick brownish exudate. Offensive discharge from nose. Swelling of glands of neck. Much depression. Temperature, 100° F.; pulse, 120.

December 14th.—Throat clear of exudate. A rather extensive superficial ulceration on soft palate. Patient made a tardy recovery with temporary paralysis of muscles of palate. Cultures showed abundant Loeffler bacilli and cocci.

Ten Cases from an Epidemic on Shipboard.—On December 17th, ten cases of true diphtheria were brought to the hospital from a Danish ship. These were all in children, some were severe, and some were very light cases. Two children had died on the voyage over. The results of the bacterial examinations of these cases were very interesting. The more severe cases had very numerous Loeffler bacilli and but few streptococci, while the lighter cases had many streptococci and few bacilli. All recovered.

Diphtheritic Rhinitis.—Rhinologists have recently been especially interested in that peculiar form of diphtheria in which the disease throughout its entire course is confined to the nasal mucous membrane. Six of these were reported in the first series. Three confined to the nostrils, and one with slight exudate also on the tonsils, have been examined since that time. Loeffler bacilli were present in the cultures of all four cases. These, like those before reported, ran a benign course and recovered in from four to seven days. The histories of these are all so similar that only the one case in which the tonsils were also affected will be reported. This is instructive in showing clinically the close connection between membranous rhinitis and tonsillar diphtheria.

Girl, aged six years. Previous history: Three years ago had severe diphtheria requiring intubation. About eight days ago she came home from school feeling ill. Two days later nose became entirely occluded and frequently bled. She has felt fairly well. Examination reveals both nostrils completely occluded with adherent grayish membrane which bleeds on removal; on tonsils tiny patches; pharynx clean. Treatment: Nasal and throat irrigation with 1 to 4,000 bichloride of mercury solution. Two days later nasal membrane separating. Tonsillar patches a little larger. Fifth day, nose and tonsils free of membrane. Cultures from both nostrils and nose gave abundant colonies of the Loeffler bacilli in nearly pure culture.

Very many examples of pseudo-membranes confined entirely to the nasal mucous membrane have recently been reported, but the membranes of only a few have been subjected to bacteriological cultures. Baginsky and Stamm[1] reported three, one of these having membrane on the tonsils also. Concetti[2] reports two. In all these five, more or less virulent Loeffler bacilli were found.

In two other cases observed by Concetti, the diphtheritic character was proven by the infection of others with true diphtheria. Zedziak[3] reports a typical case in which streptococci alone were found. His methods, however, were somewhat faulty, in that he only used agar tubes and previously tried to disinfect the nostrils.

Illustrative Cases of Pseudo-diphtheria.—Under this name are included all cases due to streptococci, and also the more infrequent cases due to diplococci and other cocci.

1. Extensive membrane in a small child. Recovery. Child, aged eleven months, admitted to sick ward of Nursery and Child's Hospital, on November 27th, with a temperature of 103° F.

November 29th.—General examination negative.

November 30th.—Glands at angle of jaw swollen externally on right side. On right tonsil, pillar of fauces, and right border of soft palate there was a thin white membrane.

December 1st.—Membrane more marked, having spread to left side of uvula. Discharge from right ear. Temperature, 103° F.

December 2d.—Quite marked improvement.

December 8th.—Membrane almost disappeared. Temperature fallen to 101.4° F.

December 11th.—Temperature normal. Child well.

No source of infection could be discovered. One week later a six months' child had a similar but very much milder inflammation.

2. A case in which the larynx was involved. Recovery. Boy, aged seventeen months. Sick for two days. Considerable laryngeal dyspnœa, no visible membrane. Temperature, 99° F.; pulse, 136; respiration, 40. Vomiting and calomel relieved dyspnœa somewhat. On second day respiration reached 60. On third day seemed nearly well and made good recovery. Cultures gave abundant streptococci.

3. A case in which the membrane first appeared on the tonsils, with later involvement of the larynx. Broncho-

[1] Arch. Kinderheilkunde, Bd. xiii., H. 3.
[2] Archiv. Ital. di Laringol., An. xii., 1892.
[3] Journal of Laryngology, etc., September, 1892.

pneumonia. Death. Boy, aged five years. No known exposure to infectious disease. On the first day the tonsils were swollen and covered with patches of slight grayish exudate. Temperature high. Good general condition.

Second Day.—The constitutional symptoms and the appearance of the throat remained the same, but a slight laryngitis developed.

Third Day.—Spasmodic closure of larynx, with stridulous inspiration.

Fourth Day.—Stridulous inspiration and expiration. Laryngeal dyspnœa becoming marked, intubation was done. Temperature, 103° F.

Fifth Day.—Marked signs of broncho-pneumonia. Child breathes easily through the tube. Temperature, 106° F. Died.

Cultures gave an absolutely pure culture of streptococci growing in long chains. Cultures revealed streptococci only. No other cases occurred in asylum.

4. A case due to a diplococcus. Male, aged thirteen. Chill, pain in limbs, and soreness of throat previous day. Tonsils swollen, right having an adherent patch, size of ten-cent piece. Temperature, 103° F.; pulse, 104. Following day glands of neck much swollen, patch larger. Temperature, 103° F. He has no appetite and feels weak. Fourth day, right tonsil same, left follicular deposits. Fever and constitutional symptoms remain. Sixth day all constitutional symptoms abated. Tonsils nearly clean. Eighth day well. Cultures gave colonies of lancet-shaped diplococci only.

5. Pseudo-diphtheria with exudate on tonsils and uvula in young adults. Girl, aged thirteen. Has felt sick and feverish for one day, with general pains in limbs and soreness in throat. Both tonsils are partly covered with brownish-white patches. Edges and tip of uvula covered with thin adherent membrane. Fifth day, membrane has disappeared. Slight ulceration still present on right tonsil. Feels well. Streptococci in almost pure cultures.

6. Female, aged twenty-two years. No history of infection. For two days increasing soreness of throat and constitutional symptoms. On admission, both tonsils, peritonsillar regions, and soft palate greatly swollen, hyperæmic, and œdematous. A dirty-gray adherent membrane covers both tonsils, and a thin membrane the edges of faucial pillars and sides of uvula. Glands of neck swollen. Great soreness of throat and pain on swallowing. Feels very ill. On fourth day all symptoms abated. On sixth day throat clean. Cultures show colonies of streptococci only.

A certain group of cases have been met with which present peculiar clinical histories and local conditions. They have occurred in persons whose constitutions have been injured by exposure and indulgence. A great proportion of them have also had syphilis. A typical case is the following:

A man, aged thirty-two, from Bellevue Hospital. Previous history: There was first noticed an infiltration of tissues of neck adjacent to the tonsils. Two days later the tonsils were found swollen and covered by adherent grayish patches. The pseudo-membrane spread rapidly during the next twenty-four hours over the lateral walls of pharynx and soft palate. He was sent to the Willard Parker Hospital. On admission body covered by an eruption which had been present for some days, and had been diagnosed as that of erythema multiforme.

The tonsils and adjacent tissues are swollen and infiltrated. Very thick, adherent, dirty-grayish membrane covers the tonsils, soft palate as far as uvula, and the lateral walls of pharynx. Temperature is 100° F., and the constitutional symptoms are slight. Under large doses of iodide of potassium and bichloride irrigation, very slow improvement began at the end of a week, after the whole uvula had ulcerated away. It was nearly three weeks before the membrane disappeared. Cultures showed nearly pure cultures of streptococci. No Loeffler bacilli.

Tables of all the Cases examined during Ten Months in which a Probable Diagnosis of Diphtheria had been made. These include the Cases of the Previous and of the Present Series.

Diphtheria. *Second series of seventy-three cases.*		Diphtheria. *Series of fifty-four cases, reported in my first paper.*		Pseudo-Diphtheria. *Second series of thirty-one cases.*		Pseudo-Diphtheria, Uncomplicated. *Severe cases, reported in my first paper.*	
Age.	Result.	Age.	Result.	Age.	Result.	Age.	Result.
9 mos.	Died.	6 weeks.	Died.	9 mos.	Recov.	11 mos.	Died.
9 mos.	Died.	6 weeks.	Died.	11 mos.	Recov.		
9 mos.	Died.	5 mos.	Died.				
1 year.	Died.	1 year.	Died.	14 mos.	Recov.	1 year.	Recov.
1 year	Died.	1 year.	Died.	15 mos.	Recov.	15 mos.	Died.
1 year	Died.	1 year.	Died.	19 mos.	Recov.	20 mos.	Recov.
15 mos	Died.	16 mos.	Died.	21 mos.	Recov.		
18 mos	Died.	18 mos.	Recov.				
19 mos.	Recov.	18 mos.	Recov.				
19 mos.	Recov.						
2 years.	Recov.	2 years.	Recov.	2 years.	Recov.	2 years.	Recov.
2 years.	Recov.	2 years.	Recov.	2 years.	Recov.	2 years.	Recov.
2 years.	Died.	2½ years.	Died.	2½ years.	Recov.	2½ years.	Recov.
2¼ years.	Recov.	2¼ years.	Died.				
2½ years.	Recov.						
2½ years.	Died.						
3 years.	Recov.	3 years.	Recov.	3 years.	Recov.	3 years.	Recov.
3 years.	Recov.	3 years.	Recov.	3 years.	Recov.	3 years.	Recov.
3¼ years.	Died.					3½ years.	Recov.
3½ years.	Recov.					3½ years.	Recov.
3½ years.	Recov.						
3¾ years.	Died.						
4 years.	Recov.	4 years.	Recov.	4 years.	Recov.	4 years.	Recov.
4 years.	Recov.	4 years.	Recov.	4 years.	Recov.	4 years.	Recov.
4 years.	Recov.	4 years.	Died.			4 years.	Died.
4 years.	Recov.	4 years.	Died.			4 years.	Recov.
4 years.	Died.	4 years.	Recov.				
4½ years.	Died.	4 years.	Recov.				
4¾ years.	Died.	4 years.	Died.				
4½ years.	Recov.	4 years.	Recov.				
		4 years.	Died.				
		4 years.	Died.				
		4¼ years.	Died.				
		4½ years.	Recov.				
5 years.	Died.	5 years.	Recov.	5 years	Died.	5 years.	Recov.
5 years.	Recov.	5 years.	Died.				
5 years.	Recov.	5 years.	Died.				
5 years.	Recov.	5 years.	Recov.				
5 years.	Recov.	5 years.	Died.				
5 years.	Recov.	5 years.	Died.				
5 years.	Died.	5 years.	Recov.				
5 years.	Recov.	5 years.	Recov.				
5 years.	Recov.						
5 years.	Recov.						
6 years.	Recov.	6 years.	Recov.	6 years.	Recov.	6 years.	Recov.
6 years	Recov.	6 years.	Died.			6 years.	Recov.
6 years.	Recov.	6 years.	Died.			6 years.	Recov.
6 years.	Recov.	6 years.	Recov.				
6 years.	Recov.	6 years.	Recov.				
6 years.	Recov.						
6 years.	Recov.						
6 years.	Recov.						
6 years.	Recov.						
6 years.	Recov.						
7 years.	Recov.			7 years.	Recov.		
7 years.	Recov.						
7 years.	Recov.						
8 years.	Recov.	8 years.	Recov.			8 years.	Recov.
8 years	Recov.						
9 years.	Recov.						
10 years.	Recov.	10 years.	Recov.				
10 years.	Recov.						
11 years.	Died.						
12 years.	Died.	12 years.	Recov.			12 years.	Recov.
13 years.	Died.			13 years.	Recov.		
14 years.	Recov.						
14 years.	Recov.						
		15 years.	Recov.	15 years.	Recov.		
16 years.	Recov.	16 years.	Died.	16 years.	Recov.	16 years.	Recov.
		16 years.	Died.				
				17 years.	Recov.		
				18 years.	Recov.	18 years.	Recov.
				18 years.	Recov.		
19 years.	Recov.					19 years.	Recov.
19 years.	Died.					19 years.	Recov.
		20 years.	Died.	20 years.	Recov.		
				20 years.	Recov.		
		21 years.	Recov.	21 years.	Recov.	21 years.	Recov.
		21 years.	Recov.				
				22 years.	Recov.		
24 years	Died.					24 years.	Recov.
25 years.	Recov.						
25 years.	Recov.						
25 years.	Recov.						
		26 years.	Died.				
29 years.	Recov.						
		30 years.	Recov.	30 years.	Recov.	30 years.	Recov.
		30 years.	Recov.	30 years.	Recov.		
		30 years.	Recov.				
		30 years.	Recov.				
				32 years.	Recov.		
34 years.	Recov.						
				40 years.	Recov.		
				46 years.	Recov.		
Total, 73 [1]		Total, 54 [2]		Total, 31 [3]		Total, 28 [4]	

[1] Recovered, 54; died, 19. Mortality, 26 per cent.
[2] Recovered, 29; died, 25. Mortality, 46 per cent.
[3] Recovered, 30; died, 1. Mortality, 3⅓ per cent.
[4] In the remaining 58 uncomplicated cases the exudate or pseudo-membrane was confined to the tonsils; all recovered. Mortality, 3½ per cent. In 20, complicated by infectious diseases, 6 died. Mortality, 30 per cent.

Bacteria Present in the Pseudo membranes.—Between August 25th and December 25th cultures were made from the exudate from 104 cases of suspected diphtheria.

In 73 of these the Loeffler bacilli were present, usually associated with streptococci, and often with other bacteria.

In 31 the Loeffler bacilli were absent; in 26 of these the streptococci were the most numerous bacteria present. The staphylococcus pyogenes aureus was only irregularly present, and usually in small numbers.

The study of the 104 cases of the present series has been of value rather in confirming the conclusions of the first paper than in bringing to light many new facts. There were several features of great interest, however. The large proportion of pseudo-diphtheritic cases in my first series is shown to have been probably due to the season of the year, the late winter and spring months in which the examinations were made being the season in which catarrhal troubles are most frequent. The considerable number of mild cases of true diphtheria met with in this last series, in which no characteristic symptoms were present, has impressed me with the great difficulty of positively excluding the diagnosis of true diphtheria in many of the milder throat inflammations, without the aid of cultures.

Mortality.—Of the 73 patients having true diphtheria, 19 died; a mortality of twenty-six per cent. Of the 31 cases of pseudo-diphtheria, 1 died.

If we separate the children under two years from the others, we find that of 10 having diphtheria, in 9 of whom the larynx was invaded, 8 died; and of six having pseudo-diphtheria, in 4 of whom the larynx was involved, none died. This is certainly a striking difference. If we group both series together, we find in 127 cases of diphtheria a mortality of 34½ per cent., and in 117 cases of pseudo-diphtheria uncomplicated with infectious diseases, a mortality of 3½ per cent. In the 20 cases occurring as complications of other infectious diseases, there was a mortality of thirty per cent. The high mortality in true diphtheria in the hospital is due to the fact that many patients are received in an almost dying condition.

Contagiousness.—In a large number of cases evidence was obtained of the direct spreading of true diphtheria.

In the families represented in this last series four lost three, and three two, of their members, by death.

Of the 31 cases of pseudo-diphtheria, 2 occurred nearly together in one hospital, and 3 in another. In none of the others was there any history of exposure to infection.

Clinical Observations. *Treatment.*—The irrigation with 1 to 4,000 bichloride of mercury solution of both nostrils and throats, is still the only local treatment used. As an experiment, it was not immediately employed in a few cases. The pseudo-membrane continued to spread so rapidly in some of these, that irrigation had to be resorted to. It was very exceptional to have any extension of the membrane after irrigation had been commenced. No symptoms of mercurial poisoning have been met with, even in those cases where irrigation was employed every half-hour.

Intubation and calomel fumigations are still employed to relieve the dyspnœa in laryngeal cases.

The mortality in these has lately been high.

In observing clinically the cases in which bacterial cultures were made, not only those which have been here reported, but also many others in dispensary classes, the cases have seemed to divide themselves naturally into certain groups.

In the extent of the pseudo-membrane or exudate, we have a rough measure of the whole number of bacteria present in the throat and in its character, whether loosely attached to a slightly altered mucous membrane, or firmly incorporated with a greatly swollen and congested one; we have some indication of the amount of absorption by the tissues and blood of the products of the bacteria.

Clinical Subdivisions of Diphtheria into Six Groups.—A division of the cases of true diphtheria, based on the extent, character, and location of the pseudo-membrane or exudate, has seemed to me to be clinically of considerable value.

1. Those in which the pseudo-membranes are very extensive, thick, and firmly incorporated with the underlying swollen mucous membrane. In these the constitutional symptoms are marked and the mortality at all ages large.

2. Those in which the development of the pseudo-membranes is largely confined to the larynx and bronchi. This form occurs mostly in young children, and is in them very fatal.

3. Those in which the pseudo-membrane is moderate in amount, involving the tonsils and irregular portions of the uvula and soft palate. These often have marked constitutional and local symptoms for a few days, but nearly always recover except in very young children.

4. Those in which the pseudo-membrane or exudate is confined to the tonsils. These resemble the last cases, but the symptoms are less marked.

5. Those in which very little or no exudate is ever present, the mucous membrane being simply slightly swollen and hyperæmic. These have usually slight symptoms and recover, but are important to diagnose, as they may infect others.

6. Pseudo-membranes confined to the nose. These occur chiefly in young children. The constitutional symptoms are slight, and all so far recorded have recovered.

For prognosis the most important facts to consider were the age, the extent, location, and character of the pseudo-membrane, the reaction of the underlying tissues, the heart action, and lung complications.

Though the association of streptococci and other bacteria with the Klebs-Loeffler bacilli undoubtedly influences the local and general symptoms, yet, as far as I could judge, they have little influence on the mortality. In the shape and size of the Loeffler bacilli, I found no constant differences which could be utilized for prognosis.

Pseudo-diphtheria.—The inflammations caused by the streptococci, and to a lesser extent by other cocci, also differ greatly. They may be conveniently divided into:

1. Pseudo-membranous angina. In the typical cases a thin, friable, grayish pseudo-membrane covers the margins of the uvula, faucial pillars, and sides of pharynx, the tonsils frequently having thicker exudates. In the less marked cases only the uvula or faucial pillars, with or without the tonsils, are affected. In these the local and constitutional symptoms differ greatly; when uncomplicated with other infectious diseases they seem to regularly recover, unless the larynx is involved.

2. Pseudo-membranous laryngitis. In these cases the larynx and bronchi are chiefly affected. Broncho-pneumonia is a frequent complication. They may die from suffocation, or from the complicating bronchitis and broncho-pneumonia.

3. Croupous tonsillitis. In these the tonsils are more or less completely covered by patches of exudate or pseudo-membrane. The local and constitutional symptoms are frequently marked in the first few days. They regularly recover.

4. Follicular tonsillitis.

5. Acute pharyngitis and tonsillitis without exudate.

6. Cases similar to all the foregoing, but complicating infectious diseases. These have a considerable mortality.

For prognosis the points to be mainly considered were the age, the location of the membrane, the condition of the bronchi and lungs, the temperature, and the relation to other infectious diseases.

Differential Diagnosis.—From the point of view of diagnosis, it is important to fully understand that there are many of the less characteristic cases of diphtheria

which are so similar in symptoms and appearances to cases of pseudo-diphtheria, that they cannot be separated from them except by bacterial cultures. Among the cases examined I found that:

No case of follicular tonsillitis in an adult was true diphtheria. No case presenting the typical appearance of well-marked cases, such as those described as pseudo-membranous angina under pseudo-diphtheria, was true diphtheria.

Most cases of pseudo-membranes and exudates confined to the tonsils in adults were not diphtheria, but a few cases looking just like them were. Most cases of acute inflammation of the pharynx and fauces, with very little or no exudate or pseudo-membrane, were not diphtheria, but a very few were, and in all of these there was a direct history of infection. The majority of uncomplicated cases of pseudo-membranous laryngitis were true diphtheria, but a few in the summer and fall, and quite a number in the late winter and spring, were not true diphtheria. In most a clinical differential diagnosis was impossible without cultures. In young children cases of tonsillitis with exudate confined to or extending beyond the crypts, and those with little or considerable pseudo-membrane, were at times true diphtheria and at times not. The two classes of cases often presented similar appearances.

True pseudo-membranes confined to the nose were in all uncomplicated cases true diphtheria.

In the milder cases of pseudo-membranous inflammations one condition was frequently observed, which was an almost certain sign of true diphtheria. This was the presence of irregularly placed patches of adherent pseudo-membrane on some other portions than the tonsils or margins of the faucial pillars or uvula. The amount of membrane usually differed on the two sides. The thick grayish pseudo-membranes which cover a large portion of the tonsils, the soft palate, and often nostrils and naso pharynx, were always the lesion of true diphtheria.

Conclusion.—Sufficient evidence has been accumulated in these studies and in those of others to show the great differences between the two divisions of pseudo-membranous inflammations.

The making of a true diagnosis in every case is not of scientific interest only, but of great practical importance. Care for the public health requires that every case of possible diphtheria be properly isolated and treated as diphtheria until all doubt is removed. Regard for the patient demands that no suspicious case that is not diphtheria be regarded and treated as such any longer than the fourteen hours absolutely necessary for making the diagnosis. In doubtful cases, therefore, it is the duty of physicians to obtain a diagnosis by the use of cultures. A correct diagnosis will also be a satisfaction to them, and will be a help in prognosis and treatment, and of great value in the diagnosing of future cases.

The efficiency, simplicity, and cheapness of the methods described for making an early diagnosis in doubtful cases would seem to render its employment by health authorities among the poorer classes advisable.

I wish in closing to thank Professor T. Mitchell Prudden for his continued interest and aid in these studies. I also wish to express my appreciation of the kindness of Dr. F. W. Lester, resident physician of the Willard Parker Hospital. Without his active co operation these investigations would have been impossible.

128 West Eleventh Street, December 29, 1892.

What We are Coming to.—The *British Medical Journal* suggests that, if doctors continue to increase and multiply as they are now doing, we are within measurable distance of a time when the profession will be reduced to a condition similar to that of the inhabitants of the famous island where the natives earn a scanty subsistence by taking in each other's washing.

A CASE OF ALTERNATE HEMIANALGESIA, WITH SOME REMARKS UPON THE SENSORY DISTURBANCES IN DISEASES OF THE PONS VAROLII.

By M. ALLEN STARR, M.D., Ph.D.,

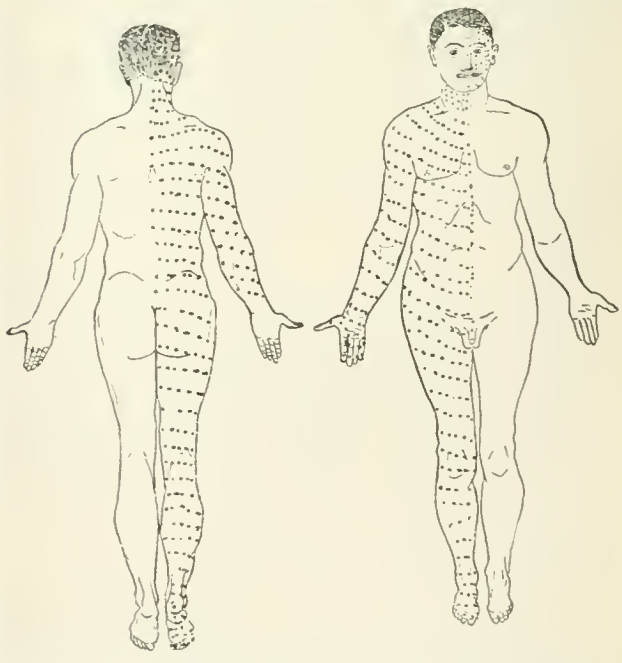
Professor of Diseases of the Mind and Nervous System, College of Physicians and Surgeons, New York; Consulting Neurologist to the Presbyterian, Orthopedic, and Babies' Hospital; President of the New York Neurological Society.

J. M——, aged forty-two, a policeman; was perfectly healthy until February 20, 1892. He went to bed in his usual condition, had not been drinking, and felt perfectly well; he awakened in the night with pain in the head and on attempting to rise found that he was paralyzed upon the right side.

His own recollection of the occurrences of the next three weeks is very indistinct, and the facts were obtained from his wife. She said that during most of that time he had some fever and was delirious, but that he had no convulsions. She said that at first his limbs on the right side were partly paralyzed, but that they soon recovered their power. She said that his eyes were persistently turned to the left, and that he could not look to the right side. She says that he complained much of headache and was sleepless. After three weeks he had recovered sufficiently to get up, and he had improved steadily up to the first of May, when he was sent to the Vanderbilt Clinic by Dr. Charles Phelps. Examination then revealed the following facts:

Patient is a very large, stout man; walks without any trace of paralysis, but is not very steady upon his feet, seems to be afraid of losing his balance. There is no motor weakness in any part of the body, his power being slightly greater upon the right side than upon the left. His knee-jerks are slightly exaggerated, but there is no ankle clonus.

Tactile sensibility appears to be about the same upon both sides of the body, the slightest touch of cotton being immediately perceived and accurately located. He says,



however, that there is a difference in the sensation of cotton upon the left side of the face and in the right arm and leg from that upon the opposide side. When sensations of pain, or sensations of heat and cold are produced, it is found that there is a complete loss of both of these forms of sensations in the left half of the face and in the right side of the body and neck and back of the head. The exact area of this alternate hemianalgesia is shown in the diagram. A needle may be thrust into the surface of this area to the depth of a half-inch without producing pain, though he feels the contact of the needle.

He has burnt his right hand slightly on several occasions without having noticed the pain.

Careful examination failed to reveal any other symptoms excepting a condition of unstable equilibrium, largely subjective. When he attempts to walk fast, to run, or to go up or down-stairs he feels dizzy, but he does not stagger or fall in any particular direction. The feeling of unsteadiness leads him to avoid such attempts.

The patient was seen again in November, 1892. The condition above described of unstable equilibrium upon sudden or rapid motion is the only thing of which he complains. He has noticed, however, that the sight in the left eye has gradually failed, and this, it is found, is due to a clouding of the cornea, the entire ball being insensitive, and slight keratitis having developed. Examination in the eye department confirmed the fact that this keratitis was of the nature found in anæsthetic conditions of the cornea. Very marked congestion of the conjunctiva was noticed and the surface of the cornea was dull and rough. The left pupil was slightly contracted. The alternate hemianalgesia still persisted, and the patient displayed a deep scar upon the right thumb, due to a felon which had run its course without producing any pain.

Within the past three months the patient had noticed a gradually increasing polyuria with corresponding thirst. An examination of the urine revealed specific gravity 1.040 and a large amount of sugar. With the exception of these symptoms the patient felt perfectly well and was able to attend to his duties as policeman.

He was examined a few days subsequently by Dr. Henry D. Noyes, who discovered a paralysis of the left superior oblique muscle, indicating a paralysis of the left fourth nerve. This condition had escaped my notice as he had not been tested with prisms or a colored glass.

As the other symptoms indicate a lesion in the left half of the pons, and as the nucleus of the left fourth nerve lies in the right half of the pons, the nerve crossing in the valve of Vieussens to the left side of the pons before its exit, it is evident that this nerve must be implicated in the lesion in its course through the pons and not at its nucleus.

Remarks.—The only case which I have been able to find in any way resembling this one was reported by Dr. Weir Mitchell at the meeting of the Association of the American Physicians of 1892.[1]

In Dr. Mitchell's case the sensations of heat and cold were lost on the left side of the face and on the right side of the body and the right limbs. Sensations of pain and of touch were normal. The condition developed suddenly and had remained for seven years.

Alternating paralysis, in which one-half of the face and the opposite arm and leg are paralyzed, is not uncommon, and is due, as is well known, to a lesion in the lower part of one half of the pons varolii.

Alternating anæsthesia is also occasionally met with, and in a collection of twenty-six cases of limited disease in the pons and medulla, made by me in 1884,[2] seven such cases are included.[3] In the majority of these cases the disturbances of pain and temperature were associated with disturbances of the tactile sense. A study of the anæsthesias occurring in these twenty-six cases enabled me at that time to reach the following conclusions:

1. If in any case anæsthesia of one side of the face occurs (not due to neuritis of the trigeminus or to cortical lesion), the lesion lies in the medulla or pons, in the outer third of the formatio reticularis. Its position in this part is to be determined by the other symptoms present; for, if it is situated high up (cephalad) in the pons, it will be on the side opposite to the anæsthesia, and if it is situated low down (caudad) in the pons or in the medulla, it will be on the same side as the anæsthesia.

2. If in any case anæsthesia of the limbs occurs (not due to cerebral lesion), the lesion lies in the medulla or pons, in the inner two-thirds of the formatio reticularis, and upon the side opposite to the anæsthesia; or in the spinal cord.

3. If one side of the face and the limbs of the opposite side are anæsthetic, the lesion affects the entire lateral extent of the formatio reticularis, and lies in the medulla, or in the pons, below the point of union of the ascending and descending roots of the fifth nerve.

4. If the face and limbs of the same side are anæsthetic, the lesion lies in the brain at a point higher than the junction of the ascending and descending roots of the fifth nerve in the pons. Its position is then to be determined by other symptoms. It may involve the entire formatio reticularis in the upper pons, or crus cerebri; it may be situated in the posterior part of the internal capsule; it may lie in the centrum ovale, destroying the radiation of sensory fibres from the internal capsule; it may be in the sensory area of the cortex in which all of these tracts terminate.

Since 1884 a number of cases of limited lesion in the pons and medulla have been recorded which present symptoms more or less similar to those mentioned in the twenty-six cases collected in 1884. The conclusions reached from those cases, and here stated, are completely confirmed by these later cases and do not need any modification.

With these facts in view, the diagnosis in the case here related is greatly aided:

First, as to the nature of the lesion. The sudden occurrence of the symptoms and their considerable extent at first and gradual disappearance seemed to indicate the occurrence of a hemorrhage in the pons. The absence of heart disease or of any specific history are sufficient in a man of his age to exclude embolism or thrombosis.

Secondly, as to the situation of the hemorrhage. It must be located in the pons varolii in its middle third, and must have destroyed a portion of the formatio reticularis upon the left side. The absence of paralysis excludes any affection of the pyramidal tracts in the ventral portion of the pons. The absence of ataxia in the anæsthetic limbs excludes any affection of the lemniscus (fillet) in the pons. Hence the lesion is small in extent in the dorso-ventral plane. It is also small in the cephalo-caudad plane; for while at first it produced a disturbance in the motion of the eyes, indicated by the conjugate deviation to the left and inability to turn them toward the right, he has at present perfect control of the ocular movements, excepting those governed by the left superior oblique muscle; therefore the lesion is not sufficiently caudad to interfere with the sixth nerve, or sufficiently cephalad to interfere with the third nerve. It must also be near the exit of the fourth nerve. The posterior longitudinal fasciculus, lying just beneath the floor of the ventricle, has an important function in the direction of the conjugate movements of the eyes;[1] hence this too has escaped disease. The sensory symptoms therefore enable one to locate the lesion and estimate its size as not greater than one-quarter of an inch in diameter.

The symptom of vertigo and uncertainty in the gait upon any rapid movements is interesting when it is remembered that the superior peduncle of the cerebellum, passes just at the side of, and above, the position in which the lesion must lie. It is not improbable that some of its fibres have been destroyed, and that this has given rise to the disturbance of equilibrium. It is interesting to notice that there is no special tendency to stagger in one direction, and yet the lesion must be limited to one peduncle.

It is evident, therefore, from a study of this case, taken in connection with that of twenty-six cases with autopsy, that it is possible to arrive at a very exact diagnosis in lesions of the pons varolii.

[1] Transactions of the Association of American Physicians, 1892, vol. vii., p. 332.

[2] Journal of Mental and Nervous Diseases, July, 1884.

[3] Loc cit. Senator, Arch. f. Psych., xi., p. 713; Meyer, Arch. f. Psych., xiii., p. 63; Senator, Arch. f. Psych., xiv., p. 2; American Journal of the Medical Sciences, xxviii., p. 106 (1841); Miles, Arch. of Medicine, October, 1881; Bircher, Schweitzer ärtzbl. Corresp., 1881, No. 4; Mills, Journal of Mental and Nervous Diseases, July, 1881.

[1] Quioc: Lyon Médical, July, 1881, Nos. 29, 30.

CARE AND TREATMENT OF THE NIPPLE IN THE GRAVID AND PUERPERAL STATES.[1]

By S. MARX, M.D.,

NEW YORK.

The paper I present this evening is not dogmatic. Certain theories which have been formulated by the writer will be presented to you as suggestions, with the hope that such theories which are founded upon actual experience in practice shall strike you as being rational; nor is there any intention to present anything startling or fantastic, but common sense ideas which have been the result of much thought and study. Of late, very little has been said or done in advancing anything new in the way of treating, with either a prophylactic or a curative aim, this very troublesome and painful disorder. It is with the one idea of provoking an active discussion that the subject of lesions of the nipples in the gravida and puerpera is presented. It will be wise for us, and you will pardon me for being so exacting, to study for a few moments the changes that occur in the nipple during early pregnancy. One of the earliest symptoms, whether objective or subjective, presented to us in the pregnant woman, is a change in the nipple and breast. Before or at the second month the changes in the nipples are very marked. They become sensitive, erectile, larger, and turgid. The epidermis which covers the papillæ becomes somewhat thickened; according to Montgomery, they are covered by branny scales. These protective scales are formed by the drying of colostrum upon the nipple. It can be milked out of the breast at all times by gently stroking the organ. Thus we have produced by nature a perfect protection to the nipple from external injury. When, from friction, rubbing, harsh manipulations, this protection is removed in places, you get the familiar erosion of the nipple. If entirely rubbed off, you have an uneven, bright red, puckered surface, presenting the picture of a sensitive, painful, fissured, or excoriated nipple. But when the nipple is protected from injury, either wilful or accidental, a hardening or seasoning of the papillæ occurs under these scales, which, to my mind, is likened to the healing of a wound under a scab. What I wish to get at will probably become entirely clear to yourselves when I go on to say that, when we read in the ordinary text-books about the care of the nipple and its treatment before confinement, how very paradoxical and perverted is the advice given us. We simply fight against the power of nature. What she in her wisdom has given us, we attempt to destroy and circumvent. Nature gives protection to the nipple; we, to prepare the nipple, or mollify some whimsical patient or pesky old woman, by our frictions and fallacious rubbings remove nature's own protection, so essential to the tender nipple's well-being. Could you think of disturbing a wound healing under a scab by rubbing, scraping, and meddling with that part until the scab is off? I hardly think that such treatment or method would present itself to you; but with the nipple, in a miniature way, it is another thing. You are seeing it done, have had it done, and will continue having it done until I can bring you around to my side and to the side of nature.

Enough as to theory, now as to practice. You will ask, what proof, practical proof, have you to substantiate these statements? My answer is, all the proof that practice and close observation can give. Of this, more later on. In the "American Obstetric Encyclopædia" the following can be read: "If, as is always with primiparæ, the nipples have been properly subjected to preparatory treatment, trouble does not often occur, consisting mainly in promoting its projection, size, form, by drawing it out daily and hardening the epidermis with daily applications of astringent alcoholic solutions." Others advise us, but all agree as to the manipulations night and morning, to use locally brandy-and-water, tincture of arnica, benzoin, etc. This presents to you the consensus of opinion of most modern writers and teachers. With one exception, they all agree as to the manipulative procedures. This exception can be found in Schroeder's "Midwifery." In this book it is stated that the breasts are to be kept warm and protected from pressure. The nipples only to be hardened when tender and sensitive from pressure and irritation, and then only by gentle washing nightly with spirit and cold water. If inverted, very careful and gradual eversion should be practised in order not to start up uterine contraction. What greater irritation, local and general, especially local, to a sensitive nipple can you get than by rubbing, pulling, washing with all kinds of astringent and irritating drugs once, twice, or more times a day? I voice his sentiments, and even go further and say, let the nipples alone, absolutely alone, only for cosmetic reasons use cold ablutions; protect them from external irritation and pernicious corset-bones and corsets by appropriate shields or plentiful absorbent cotton, and you will see fewer excoriated and fissured nipples, fewer infective mastites, and smoother convalescences from child bed.

When I look back to my hospital practice in maternity wards, and reflect how few sore nipples and breasts we had to deal with, and compare this with the condition I formerly met with in practice where I encountered so many such, I can only attribute it to meddlesome interference. Certainly women, admitted to hospitals shortly before expected labor, who are filthy, half-starved and clothed, and ignorant, know nothing of the prophylactic treatment of their nipples. And yet it was quite infrequent to see as a result sore nipples and breasts. In what other way you can account for it I do not know. It has been claimed that the rare occurrence of mastitis in hospital practice is due to the uniform and careful application of the breast binder; but in this I do not agree. Believing as I do, that all mastites, excepting and excluding traumatic influences and improperly regulated nursings, are due to an infection specifically caused by the entrance of toxic matter by way of fissures and erosions of the nipple, I do not see how the breast-binder can possibly prevent a mastitis. This much I will admit, that when a mastitis is threatening, a tight and uniform application of a stout breast-binder will do more to disperse the inflammation than any other remedy in our power.

The infrequent occurrence of sore breasts, in my opinion, is due to the fact that the nipple during pregnancy has little or no attention, protected only by that branny exudate which comes from the breast during early pregnancy. But in private practice, in spite of your prophylactic treatment, how often do you see women who do not have sore, excoriated, and fissured nipples? Since introducing my theories into practice I see very few such complications; and when a gravida asks me what she should do for her nipples—and how few do not ask this question—my invariable answer is: Stop wearing corsets, if possible; instead, wear a corset-cover to support the breast. Protect your nipple with plenty of absorbent cotton, and forget you have a nipple. Nothing more, unless the nipple is inverted, and then gently drawing it out three times a week by means of a breast-pump will remedy that defect. When the nipples are tender and sore, no other measure is recommended than the application of a ten per cent. ichthyol-lanolin salve. This in a few days heals the parts perfectly.

Before going on to the treatment of lesions of the nipple during lactation, I wish to call your attention to the diagnosis and dangers of such lesions. The diagnosis in most cases is simple. The presence of pain and visual inspection are all that is necessary. But there are puerperal cases which present general symptoms—high fever, rapid pulse, severe pains in the head, back, and abdomen—which we can refer to minute nipple lesions only after a process of careful exclusion. Local inspection helps us but little, for the nipple, though

[1] Read before the Metropolitan Medical Society, January 25, 1893.

a little tender, fails to reveal the minute rhagades which are always present in these cases. This condition occurs in those nipples apparently healthy which are large, hard, prominent, and present an almost even and unbroken surface. The puerpera rarely complains of pain in the breast during nursing, but suffers from reflex symptoms. The course of the temperature and the general symptoms are so very peculiar that to one seeing but a few of these cases the diagnosis is not so difficult after all. The pains, though at some distance from the breasts, the extreme nervousness, the temperature, the rapid pulse, the anxiety, are all markedly increased during the act, or at least at the beginning, of the nursing process. After the act the patient is more comfortable and quiet, but the temperature and pulse do not fall to the normal between the nursings. The fever chart would be characteristic if taken at short intervals. At first a rapid rise, to remain at its height while the infant is at the breast, then a gradual fall to a subfebrile condition.

In chronic cases of this class I have several times made the diagnosis of minute rhagades by carefully taking the temperature four times in twenty-four hours. For example, in some women after the puerperal period a fever persists for days, weeks, and months. A diagnosis seems impossible. She is treated in every possible manner by different specialists, but still the fever persists. The temperature chart would show a higher degree of fever during nursing, and in some a marked temperature in the morning, higher than in the evening. And this for this reason, that the child in many cases, especially among the lower classes, suckles the greater part of the night and constantly. This in itself, on account of the constant irritation of a small fissure, is enough to keep up a temperature, and a high one at that. Wean the child or use proper local measures, and your temperature disappears.

Now as to the dangers: 1. Chronic ulcer of the nipple, ulcer with sloughing. 2. Chronic eczema, with the possible predisposition to mammary cancer. 3. The most frequent is a severe acute mastitis, with the possibility of general septic infection. As mentioned above, it is my belief that there is hardly a mastitis which is not due to nipple lesions; for, *a*, in every case a fissure or erosion, no matter how small, can always be found; *b*, as a rule the mastitis is found on that side of the breast corresponding to the situation of the lesion on the nipple; *c*, we have a point from which the infection may be carried into the milk-channels; *d*, mastitis without lesions of the nipple is certainly rare. In spite of the fact that pathogenic cocci have been found in human milk, yet it requires an extra stimulus to start up a mastitis. Cohn and Newman,[1] as a result of the examination of milk from a healthy woman, which was obtained under all antiseptic precautions, state that the milk nearly always contains microorganisms, usually pus cocci, especially the staphylococcus albus. The newer the milk the fewer the cocci. The same get into the breast from without; therefore, the first milk drawn, that situated in the periphery of the gland, contains a greater number of cocci than that drawn later. Fermentation does not take place on account of the pus cocci, and the milk always has an alkaline reaction.

The fact that so many drugs have been recommended for the treatment of this disorder, shows us at once how difficult it must be to treat such cases. 1. Insure support and rest to the organ by a firm binder with holes for the nipples, to allow their exposure for the escape of milk and application of remedies. 2. Diminish the frequency of nursing as much as possible, even to the extent of temporary weaning, in order to allay both local and general irritation. Frequent nursing delays healing of the lesion. 3. As a palliative measure, a five or ten per cent. cocaine solution, applied shortly before putting the child to the breast, will certainly insure perfect freedom from pain. If the nipple be generally tender, without a break in the continuity of the surface, a ten per cent. ichthyol-lanoline ointment has given me the best results. When fissures or erosions are present, having an unhealthy, uneven, deep-seated, sloughy appearance, a thorough cauterization with lunar caustic, or better still, a brisk curetting with a small dermal curette preceded by cocaine to quiet pain, and followed by some stimulation, as by the ammoniated mercury ointment, balsam Peru, or aristol in substance, or other antiseptic drug, is all that is necessary. Where there is a deep-seated, healthy ulcer present which fails to heal in spite of all our remedial agents, I believe that the passage of one or more fine sutures might prove the ideal method of treatment, if combined with perfect rest for thirty-six hours and firm breast compression.

During the last two years I have treated all fissures and erosions of the nipple with a strong ichthyol ointment, and so universally successful has it proven that I have discarded all drugs for this one. Three cases of my own I can distinctly recall to mind at this moment, in which it acted like a charm, in quieting the pain and causing rapid healing. In a fourth case which I treated, the physician in charge had faithfully tried all the remedies which are commonly used. The ulcer surrounding the nipple was deep, irregular in shape, and angry-looking. In a short time the ichthyol ointment cured it. The condition of this nipple was undoubtedly due to the regular washing with a bichloride of mercury solution. In my experience no severer irritant can be applied to the nipple than a bichloride wash or carbolic solution, no matter how weak they may be. The breast and nipple show a decided antipathy toward these antiseptics, and in my opinion they should never be used. Should it be desirous to use an antiseptic solution, a one per cent. creolin or Thiersch solution could be recommended. The ichthyol ointment I use is twenty-five per cent. in strength. It should be constantly applied. Of late I have used the formula recommended by Oehren in the *Therapeutische Monatschrift*, No. 2, the composition of which is: ℞. Ichthyol, 4.0; lanolini et glycerini, āā 5.0; olei olivari, 1.0. The advantages he claims for this ointment are that it soon checks the excruciating pains of suckling. The fissures rapidly heal, without taking the child from the breast and without necessitating the use of nipple shields; owing to its consistency the salve can be easily and thoroughly washed off. The salve is non-poisonous, and even if the nipple be not washed off, no harm is done the child.

In concluding, yet a few words concerning a threatened mastitis. As soon as a mastitis threatens, apply firm, even compression by means of a binder of strong cheese-cloth. A roller bandage, so much in use in former years, should not be applied, because the pressure is not uniform and certainly predisposes the formation of lumps in the breast. Under no condition should the inflamed breast be rubbed or massage instituted; no matter how gently done, it increases the irritation and general inflammatory trouble. The corresponding arm should be tied to the side, nursing should be postponed for a number of hours, and absolute rest should be insisted upon. Locally, it is my custom to use nothing but iced lead-water applications regularly applied. Internally, the patient is given one large dose of iodide of potash, three grains in seltzer or milk. To increase the depleting action of this drug, ʒ j. of sal. Rochelle is given hourly until the patient has a number of large watery evacuations.

Such is the treatment in cases of threatened mastitis, and I am happy to say that the results have proven very satisfactory.

1111 Lexington Avenue.

[1] Virchow's Archiv, Bd. 126, Hft. 3.

San Francisco Druggists are indulging in a war of cut-rates on patent medicines, and each vies with his neighbor in his efforts to induce the simple public to swallow the poisons. Among the attractive head-lines in their advertisements in the newspapers one of the most taking is: "Are you sick? If not, get sick and enjoy cut-rates."

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE RESULTS OF QUARANTINE LEGISLATION.

QUARANTINE legislation has now reached a stage that enables us to forecast the principal features of the measure which will finally receive executive approval. The Senate, or Harris's bill, with slight modifications, will become a law. The House, or Raynor bill, was reported back by the Senate Committee amended by striking out all after the enacting clause and inserting the original Senate bill. In this form it passed the Senate again, and at this writing the House has concurred in the Senate's amendments. We are in a position, therefore, to determine what will be the outcome of the wide agitation in favor of a national quarantine.

The title of the bill must now be that of the original House bill, viz., "To provide for the better protection of commerce and for the general welfare by the establishment of a national quarantine," and so forth. That bill did create a national quarantine, with a central governing sanitary council. It provided "that in the methods of sanitation and general equipment, in the period of detention for sanitary treatment and for observations prescribed for each quarantinable disease in the schedule of charges, and in all rules and regulations governing quarantine, there shall be a uniform system adopted by the National Sanitary Council," etc. The substitute or Senate bill under this new title, comes far short of meeting the just expectations of the country. In fact, the title is a misnomer. Every effort to amend the bill so as to create a national quarantine, paramount to all local quarantines, was defeated.

Precisely, then, what do we gain by the measure about to become a law? The most important gain is ship sanitation. It will be possible hereafter to enforce that degree of cleanliness of passenger vessels which will prevent them from being carriers of contagious and infectious diseases. Of great importance, also, is the provision to have a medical officer connected with the consuls at foreign ports. There can thus be provided a system of inspection of emigrants, cargoes, and vessels which will insure the best sanitary condition of passenger ships.

As regards the quarantine powers which the bill confers it must be said that they come far short of what the public has lately demanded. The bill is ingeniously drawn so as to give the general Government an apparent power paramount to that of State and municipal quarantine authorities, but it is evident that if they are exercised there must be a conflict which would be most undesirable and disastrous. The Secretary of the Treasury is empowered to make such additional rules and regulations to prevent the introduction of contagious diseases at any port as he may deem necessary, and require the sanitary authorities of the State or municipality to enforce them. But if the local authorities fail or refuse to enforce them the President shall execute and enforce them, and adopt such preventive measures as in his judgment shall be necessary. This is the nearest approach to a national quarantine. The power given the President is extraordinary and for prudential reasons will never be exercised.

An additional provision shows a feeble attempt at Federal control of quarantine. It is provided that at ports where sufficient quarantine provision has been made by State or local authorities the Secretary of the Treasury may direct vessels bound for such ports to undergo quarantine at such State or local station. The importance of this power is by no means apparent. Why, when, and how the Secretary is to direct vessels bound to Boston, New York, or New Orleans to undergo quarantine at those ports respectively does not appear. Vessels bound to those ports must undergo quarantine at the local stations, whether the Secretary directs them or not. This provision of the law will be inoperative at the great sea and gulf ports.

The most decisive attempt to assert the supremacy of the custom officials over the local quarantine authorities appears in the power given the Secretary of the Treasury to make rules and regulations to be observed in the inspection, disinfection, isolation, and treatment of cargo and passengers. Vessels are forbidden entering a port to discharge their cargo, or land their passengers, except the health officer at the quarantine station certifies that the rules and regulations of the Secretary have been observed and complied with. This certificate, together with the bill of health, must be delivered to the Collector of Customs. If this provision is rigidly enforced, the Secretary of the Treasury can compel all vessels to undergo such form of quarantine as he may devise. But this method of securing Federal control of the administration of State and municipal quarantines is so indirect that great confusion and possible conflict of authority must follow the attempt.

One section of the bill empowers the President, when it is shown to his satisfaction that there is serious danger of the importation of cholera or other contagious diseases from a foreign country, notwithstanding our quarantines, to prohibit in whole or in part the introduction of persons or property from such countries for such period as he may deem necessary. This is a revival in full force of the antiquated system of non-intercourse, and will make our legislators the laughing-stock of European governments. Perhaps the explanation of this curious excerpt of mediæval quarantine law is found in the last section of the bill, wherein Congress very deliberately abolishes the only branch of the public service capable of devising and administering methods for protection of the country from foreign epidemics, viz., the National Board of Health. If we are to be deprived of every semblance of a competent sanitary council in public af-

fairs we must inaugurate the ancient non-intercourse policy.

This final repealing clause is indeed a sad commentary on our progress in State medicine. As we formerly stated, this measure is mainly a re-enactment of the law of June 2, 1879, which gave the National Board of Health its power to suppress the yellow fever epidemic and take measures to prevent its introduction into this country, and its spread from one State into another. It expired by limitation in 1883, and as there was no further return of that disease Congress failed to re-enact it. The National Board of Health, probably the best organized sanitary body of any nation, has been allowed to remain in existence until the present time. If this measure becomes a law it would seem that the National Board which accomplished so much in 1879–83, would best administer it. But just at this critical moment of the revival of the old law we find that wherever the National Board of Health was formerly mentioned as the authority, the Secretary of the Treasury is substituted, and the last section abolishes that Board and turns over all its belongings to this officer.

The Secretary is to prescribe a bill of health; to make rules and regulations to prevent the introduction of contagious and infectious diseases from foreign countries, and their spread from one State into another; to make rules necessary to be observed by vessels at the port of departure, and on the voyage, to secure their best sanitary condition; to make such additional quarantine rules as *he* may deem necessary at any port where, in *his opinion*, existing rules are not sufficient; to obtain sanitary information from various sources, etc.

These and like sanitary duties, which in other countries are committed to medical men of the greatest scientific attainments and largest experience, are by our legislature imposed upon an officer of Government who has not a semblance of qualifications for such functions. These anomalies in legislation on matters pertaining to the public health are peculiar to this country, and show a humiliating ignorance of the first principles of sanitary administration on the part of our most intelligent legislators.

Briefly, the country has obtained little good and some bad legislation by the wide agitation in favor of a national quarantine. But we must be patient. The relentless schoolmasters in preventive medicine, cholera, and yellow fever are abroad, and sooner or later will impress their sad but instructive lessons upon the intelligence of the most ordinary legislator, and better laws will follow.

It required the sacrifice of fifty thousand lives and $100,000,000 during the yellow fever epidemic of 1878–9 to induce Congress to create a National Board of Health, and enact a law by which it could suppress the pestilences and provide defences adequate to the future protection of the country. It will require a wide-spread epidemic of cholera, with all its destructive forces arrayed against the health and lives of the people and the business of the country, to compel Congress to create another competent sanitary body, and a well-organized code of national health laws which will enable it to erect and maintain adequate defences against the importation of foreign epidemic diseases, and the spread of our domestic pestilences.

PELVIC TROUBLES DUE TO MOVABLE KIDNEY.

Among all the surgical fads which have recently sprung up, nephrorrhaphy is one that we regard with only a little less aversion than the indiscriminate removal of the ovaries, a subject to which we have often alluded, and always with an undercurrent of strong conviction. A recent foreign writer states that movable kidney is "more often the cause than the consequence" of pelvic troubles; that displacements of the uterus and even disease of the tubes and ovaries are directly due to the fact that the kidney happens to be less firmly fixed than usual. He claims that this condition is found in twenty per cent. of all gynecological cases, and cites a number in which he cured patients by nephrorrhaphy after castration and even vaginal hysterectomy had been performed without benefit. Now, we have no intention of questioning the veracity of the writer, who is doubtless perfectly honest in his convictions, but we protest that this teaching is distinctly dangerous, in fact there is a growing tendency in our midst to adopt the same line of procedure. Granting that movable kidney is more common in women than was formerly supposed, its frequency has not only been exaggerated, but we are by no means sure that it possesses the pathological importance which has been assigned to it, or that it constitutes, except in rare instances, a valid indication for surgical interference. A few years since, slight anteflexion of the uterus was looked upon as an abnormality which could only be cured by an operation, until Schultze demonstrated the fact that it was the normal position of the uterus. It is certain that nephrorrhaphy is not infrequently performed in cases in which the kidney is found so nearly in its normal site that it is a question if it has exceeded its usual range of mobility under physiological conditions. Here is a fine opportunity for the cultivation of a healthy, conservative sentiment, before the public becomes so accustomed to the practice of anchoring wandering viscera that no woman will be satisfied with her internal organs, but will refer every colicky pain to an aberrant viscera and question the wisdom of the Creator, who so often requires the aid of the surgeon to correct His errors.

RECIPROCITY IN MEDICAL REGISTRATION.

In a recent issue our Canadian correspondent called attention to a condition of affairs existing in the Dominion which he characterized as a peculiar anomaly. It is that nearly every Province in the Dominion has its own medical licensing body, and that the license to practise in one Province is not recognized in another. A medical man, therefore, wishing for any reason to change his residence from one part of the Dominion to another forfeits his right to practise if he oversteps the boundaries of the Province in which his license was obtained, and must submit himself to another examination if he wishes to follow his calling in his new home. It does, indeed, seem strange that a man who had proved his fitness to care for the sick in one part of his country should be regarded as incompetent in another part of the same country, and should be compelled again to demonstrate to the satisfaction of his new colleagues that he is an educated physician and not a quack. But the same anomaly exists in

the United States to a certain extent, and is rapidly becoming universal as one State after another falls into line in the enactment of medical practice laws.

The New York *Medical Times* for January, 1893, calls attention to the fact that a man who is a legally qualified physician in New York becomes a law-breaker if he attempts to prescribe for a patient in New Jersey, and it urges the adoption of measures looking to the adoption of reciprocity in medical registration in the different States of the Union. It announces that a bill will be introduced during the present session of the New York State Legislature to establish suitable reciprocal provisions with other States, whereby this inconvenience may be done away with. A bill is also to be introduced into the Pennsylvania Legislature this winter to establish a Board of Medical Examiners in that State, and one of its provisions is that the said board "may at its discretion grant licenses without examination to persons holding licenses from similarly constituted boards of examiners or boards of health in other States."

Of course great care will be necessary to see that the standards in the different States are similar, and that no State by reason of lax examinations become a sort of diploma-mill for granting licenses to incompetents from other places. We shall watch for the introduction into our own Legislature of the bill to which our esteemed contemporary refers, and if its provisions be such as to keep out licentiates from States with registration laws less stringent than our own we should be inclined to favor its adoption. Certainly some form of reciprocity between the various components of the Union is greatly to be desired.

THE "NEW MESMERISM."

Within the past few months most wonderful tales have appeared from time to time in the daily press concerning certain mesmeric performances in the Paris hospitals. It was gravely stated that Dr. Luys, of La Charité Hospital, had obtained such a development of hypnotic suggestion as to bring about a transferrence of sensibility to inanimate objects. For example, a person in the hypnotic state would receive a suggestion that a glass of water was part of himself and was capable of sensation. Then the glass would be taken out of his sight, and when the contained water was agitated the patient would be visibly disturbed or even give evidence of acute suffering. Other inanimate objects were capable of receiving like impressions, and there was apparent danger that this "externalization of the sensations," as it was called, would come to be regarded as an accepted fact by not a few prominent scientific men with more imagination and credulity than sound commonsense.

Mr. Ernest Hart, when in Paris recently, had his attention drawn to these seemingly astounding manifestations of occult force, and was so impressed with what he saw that he determined to seek out the cause. It took him but a very short time to see that the subjects of these hypnotic experiments were impudent impostors, and that Dr. Luys was the victim of gross fraud. He suggested to the doctor the employment of certain simple tests, such as the substitution of inert substances for the drugs in sealed tubes which were supposed to act upon the subjects when brought near the body. Dr. Luys, however, declined to act upon his suggestion, saying that he could perform the experiments only in his own way, and if they failed to convince he could only express his regret. Mr. Hart then procured the attendance of five of these subjects in his own apartments and repeated the experiments in the presence of a number of Parisian and foreign medical men. The same phenomena, he says, in a communication to the London *Times*, "were reproduced with sham magnets, with substituted figures, with misnamed medicinal substances, and with distilled water, and with sham 'suggestion,' opposite suggestion, or none at all. Everyone was able to convince himself that all the results so shown were, without exception, simulated, fictitious, and fraudulent. That some of the patients were hypnotic and hysterical in a high degree does not alter the fact that from beginning to end they all showed themselves to be tricksters of the most barefaced kind; some of them very clever actors, possessing dramatic powers which might have been turned to better purposes, most of them utterly venal, and some of them confessing that they played upon the credulity of Dr. Luys for their own purposes."

It is strange to think that men of scientific medical training can be so thoroughly duped in this closing decade of the nineteenth century, and we may well pause to ask ourselves whether, after all, the world is any less credulous than it was in the good old days of witchcraft and diabolism. There may be a greater number of hard-headed sceptics abroad, but a large portion of mankind is still hungry for the incomprehensible and the supernatural, and as religious faith wanes superstition seems but to take a firmer hold on certain minds.

NURSES AND STEWARDESSES.

A suggestion was made recently by *The Lancet*, which seems to us to be a particularly wise one, and we should be glad to see it carried out. It is that ships' stewardesses, especially those on the large boats of the Atlantic ferry, should also be trained nurses. Ladies at sea, especially if sea-sick, often require, or at least would be much more comfortable, if they could secure little medical attentions which it would be out of the province of the ship's surgeon, and beyond the capability of most stewardesses to render. Then, again, there are many little things which a trained nurse could do to relieve suffering which would never occur to the mind of a person uninstructed in the art of caring for the sick. In little things of this sort a trained nurse could make her presence very gratefully felt, but in case of actual illness her services would be almost indispensable.

Of course the steamship companies would have to pay more for nurses than for stewardesses, but they could well afford to do so by reason of the increased popularity of the lines introducing the improvement. Any company that would employ trained nurses and then see to it that none but thoroughly competent physicians were engaged as surgeons on its ships, would, we venture to say, soon reap its reward, and distance all its rivals in the favor of the travelling public. One of the transatlantic lines is soon to sail its ships under the American flag, and it would be a popular and patriotic thing for the mana-

gers of the line to secure the services of a number of American trained nurses and of a competent and experienced American surgeon for each of its vessels. The doctor's services, if they were worth anything, would be worth a good deal more than the steamship companies now pay; but we venture to say that it would be money well spent.

News of the Week.

Successful Symphysiotomy. — Dr. Henry C. Coe, of this city, has just had a successful case of symphysiotomy, delivering a live child through a pelvis with a conjugate of a little over three inches. This is the third symphysiotomy in New York, and the tenth in America—two having been reported in Philadelphia and one in Brooklyn.

Pasteur Institutes have recently been established in Lisbon and in Brussels.

New Medical Journals.—The *New York Therapeutic Review* is a new quarterly published in this city and edited by Dr. Paul Gibier. The *New York Polyclinic* is the title of a monthly journal edited by the Faculty of the Polyclinic.

Dr. Harry Hungerford, of Stamford, Conn., died in this city, February 3d, aged thirty-five years. Dr. Hungerford was Surgeon-General on the staff of the Governor of Connecticut.

Dr. J. W. Brannan has been appointed visiting physician to Bellevue Hospital, in place of Dr. Walter Gillette, resigned.

Too Many Policlinics in Berlin.—A meeting of doctors and surgeons was recently called by the Berlin "Aerztliche Berufsverein" to discuss the question of the so-called "policlinics," which are cropping up everywhere in Berlin. There are at present one hundred and eighty-three establishments with this high-sounding name in Berlin, many of which serve no object either of scientific research or tuition. A committee of six gentlemen was elected to study the question in detail and report upon it, with a view to further steps.

Transverse Incision for Laparatomy.—Dr. Bardenheuer has published sixty-three cases in which he opened the abdomen by a transverse incision immediately above the symphysis, the patient being placed in Trendelenburg's posture. He prefers this method in cases of deep-seated pelvic neoplasms and purulent foci, which are rendered more accessible through the transverse incision. If the wound is carefully closed there is no danger of ventral hernia. He sutures peritoneum, fascia, and muscle separately with catgut, previously including all the layers with silver-wire sutures. In performing ovariotomy the stump is attached to the opposite angle of the wound.—*Centralblatt für Gynäkologie.*

The Metropolitan Medical Society elected the following officers for the ensuing term: Henry S. Stark, M.D., *President*; S. Marx, M.D., *Vice-President*; B. F. Ochs, M.D., *Recording Secretary*; E. Meierhof, M.D., *Corresponding Secretary*.

The Quarantine Committee of the Academy.—In appointing the National Quarantine Committee to draft a suitable substitute for the bill now before Congress, against which a protest is to be entered, the President of the Academy evidently overlooked the officers and members of the Section in Public Health, who would naturally be interested. The committee includes two ophthalmologists, three gynecologists, one orthopedist, two neurologists, one laryngologist, one general surgeon, one pathologist, one dermatologist, one otologist, and several general practitioners who were on the original committee.

The New York Academy of Medicine and Quarantine.—At a meeting of the New York Academy of Medicine last week, a Committee on Quarantine was appointed consisting of Dr. T. G. Thomas, *Chairman*; Dr. Richard H. Derby, *Secretary*; and Drs. A. Jacobi, E. B. Bronson, C. L. Dana, J. H. Girdner, E. G. Janeway, D. B. St. John Roosa, Lawrence Johnson, C. C. Lee, Daniel Lewis, T. M. Prudden, A. H. Smith, Stephen Smith, S. O. Vanderpoel, D. D. Webster, T. M. Markoe, Charles McBurney, M. Allen Starr, and C. C. Rice. The Committee has put itself in correspondence with other medical societies for the purpose of co-operation in securing a national quarantine. At a meeting held February 4th the following presentation of their views was adopted:

"Representing the New York Academy of Medicine, and under its instruction, we have requested of your honorable body a brief hearing in the matter of the establishment of a national quarantine. We appreciate the earnest and sustained attention which you have given to this problem, the immediate and wise solution of which is of such vital importance to the personal and commercial interests of all the States which this Congress represents. We realize that the responsibility of protecting this country from an impending calamity, so far as this can be done by judicious legislation, rests wholly with you, and that the urgency and weight of that responsibility cannot easily be over-estimated. We know that the time is brief in which efficient measures can be taken, and that it is important at this late day not to add to the difficulties which beset legislative action. We do not think it necessary to rehearse to your honorable body in detail the arguments which have led to our conviction of the importance of a comprehensive national quarantine. The uniformity of system and practice which would be assured by a national quarantine, the large and varied resources, both in trained men and in material, which would be available; the power of rapid concentration of forces at a point of threatened invasion by infectious disease; the avoidance of wide-spread apprehension and panic which a national administration would favor; the full and direct command of consular assistance and the promise of international co-operation; the concentration of responsibility in a single administrative body; the equable distribution of the expenses of a protective agency in whose benefits all parts of the nation share; the removal of disastrous conflicts in authority, and the suppression of petty local political and pecuniary ambitions, now often openly pursued regardless of the public weal—these are hints of some of the more manifest advantages which a full national control of quarantine seems to promise. We come to you, then, gentlemen, not with arguments, for we feel that already the subject has received your careful attention in all its many bearings. We do not come at this late day to urge details, for that we know it to be your special duty to arrange. But we

do feel strongly that to experiment with varying and variously managed local quarantine establishments, in the face of a threatened epidemic of Asiatic cholera and typhus fever, is only to court disaster. We therefore come to you as medical men simply to express, and express most earnestly, our conviction that, whatever form your legislative action may assume, its outcome should be the establishment at once of a complete quarantine system, without reserve, under national control, paramount to all local systems, and as comprehensive in its scope and power as constitutional limitations will permit. We believe that so, and so only, can threatened suffering be most surely averted, life spared, commercial interests shielded, and the rights of individuals maintained during the administration of those protective agencies which are evoked for the common weal."

Obituary.

GEORGE JACKSON FISHER, M.D.,

SING SING, N. Y.

The news of the death of Dr. George Jackson Fisher, of Sing Sing, will be received with wide regret, for few physicians of the State were better known or more highly esteemed. On January 13th, while amputating a leg, he inflicted a slight wound of his left index finger, resulting in septicæmia, which caused his death. He was born in Westchester, N. Y., November 27, 1825, and received the honorary degree of M.A. from Madison University in 1859. He graduated in medicine from the Medical Department of the University of New York in 1849. After practising for two years in Mecklenburg, N. Y., he removed to Sing Sing, where he remained during the remainder of his life. He was twice President of his County Society of Westchester, in 1864 was elected Vice-President of the Medical Society of the State of New York, and in 1874 was elected its President; was delegate to the International Medical Congress at Philadelphia in 1876, Physician to the State Prison at Sing Sing during 1853 and 1854, served twenty years as Brigade Surgeon National Guard, S. N. Y., and during the War of the Rebellion was an active volunteer for the United States Sanitary Commission.

Dr. Fisher was thoroughly identified with the medical history of this State.

Dr. Fisher was the most enthusiastic, learned, and successful medical bibliophile in this or perhaps any other country. He had gradually accumulated a library of medical antiquities and classics numbering five thousand volumes, many being extremely rare and valuable. As regards his own writings Dr. Fisher was best known for his contributions to teratology and medical history.

Physical Effects of Playing Golf.—The London correspondent of the *Boston Medical and Surgical Journal* writes that every new game appears to bring with it one or more peculiar and characteristic physical effects or defects. We have heard of the "tennis elbow" and the "bicycle chest," and now an authority in a monthly periodical writes of the "golf straddle, golf waggle, and golf twist." The symptoms of these various peculiarities are described so that they may be recognized by even a layman upon the street If, for iustance, a man is seen "coming down Pall-mall with his legs wide apart, his head and shoulders twisted round backward, and his hands aimlessly swaying his umbrella, you know at once what has happened." It is sometimes a little difficult to tell advanced golf symptoms from a mild case of inebriety.

Society Reports.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Eighty-seventh Annual Meeting, held at Albany, N. Y., February 7, 8, and 9, 1893.

LEWIS S. PILCHER, M.D., OF BROOKLYN, N. Y., PRESIDENT, IN THE CHAIR.

FIRST DAY, TUESDAY, FEBRUARY 7TH—MORNING SESSION.

Inaugural Address of the President. — DR. L. S. PILCHER, President of the Society, after some preliminary remarks referring to the requirements of the by-laws of the Society concerning the condition of the profession throughout the State, said: The estimated number of practitioners of medicine in the State of New York at the present time is 10,000, the estimated population 6,000 000, or one physician to every 600 of population. Of these 10,000 about eight thousand are practitioners of rational medicine, 1,300 of homœopathic medicine, 400 of vegetable medicine, and the remaining 300 represent many kinds of medical theories. The number of schools devoted to undergraduate instruction in rational medicine is nine; of those, two are in the city of Buffalo, one in the city of Syracuse, one in Albany, one in Brooklyn, and four in New York City. Two thousand and ninety-six students are at the present time under instruction in these schools —128 in Buffalo, 58 in Syracuse, 170 in Albany, 201 in Brooklyn, and 1,539 in New York City. The number of schools in the State of New York devoted to post-graduate instruction is two, both in New York City. During the past year the number of matriculants at these two schools have aggregated 819. The number of students in the medical schools of this State is especially significant, from the fact that the entrance into these schools is guarded by a preliminary examination prescribed by the State and conducted not by the officials of the schools but by the Board of Regents of the University of the State, an examination which is not a mere form but is sufficient to insure that intending students of medicine shall already possess a fair general education before beginning their technical studies; it is still more significant by the fact that the diplomas of these schools no longer confer the right to practise medicine in the State of New York, and have a value only as the thoroughness and comprehensiveness of the instruction to which they testify is acknowledged by public opinion. The laws of the State further require that all who hereafter enter upon the practice of physic and surgery in this State shall have attended three full courses of lectures, and all the medical schools of the State now require the same amount of attendance upon lectures before the granting of a diploma, while the general influence of these teaching bodies is to encourage their students to extend their periods of lecture attendance to four years. The influence of the present conditions that attend medical education in this State is very healthful, in that every teaching corporation is directly stimulated to improve its methods and facilities for teaching that thereby students may be attracted to its halls. An examination of the curriculum and the published statements of each of the schools of this State, supplemented in some instances by additional statements from the Dean, shows that much has been done already, and more is contemplated in the immediate future, toward securing proper gradation of studies, division of students into small sections under tutorial supervision, systematic text-book and laboratory drill, and adequate personal contact of the students with patients in dispensary and hospital classes.

Supply of Anatomical Material.—The present law of the State with regard to the supply of anatomical material is fairly liberal, and an enlightened public opinion has sustained its practical application whenever it has been

brought into question. Laboratories of histology and pathology have been furnished and equipped in connection with all the schools, and in New York City and Brooklyn elaborately planned and fully endowed institutions for these departments of instruction exist, in which not only the instruction of students is provided for, but every facility and encouragement for original work is furnished, not only to their own staff of instructors, but to any member of the medical profession.

Obligatory Obstetrical Practice for Students.—The department of practical obstetrics presents conditions of special difficulty in American communities for organization so as to give the needed amount of practical demonstrative teaching to students. Appreciating this, and thinking that this one department might be taken as a fair index of the average character of the instruction that was now being given in the medical schools of this State, I addressed to each of them an inquiry as to the amount of practical experience in midwifery required by each of a student before graduation, stating that I intended to present the information thus obtained to this Society. The following are the answers received:

Medical Department of Niagara University: Each student attends from 5 to 10 cases before graduation. Medical Department of the University of Buffalo: Each student is required to attend at least 2 cases. Medical Department, Syracuse University: At least 1 case must be attended, usually from 3 to 4 are given. Albany Medical College: Provision is made to enable members of the senior class to attend 1 or more cases of obstetrics. Long Island College Hospital: All obstetrical cases in this hospital and in the Kings County Hospital used for clinical instruction. Six students in the former and three in the latter attended each labor. The average number of labors attended by each student has varied from 5 to 15. Woman's Medical College of the New York Infirmary: Each student is required to attend on 10 cases. Bellevue Hospital Medical College: Each student recommended to have a two-weeks' course at the Midwifery Dispensary, during which each student attends at least 6 cases of labor, but this is not obligatory. Medical Department, Columbia College: Every student required to attend the Sloane Maternity Hospital for one week, day and night, examine all cases, and be present at all confinements. Medical Department, University of the City of New York: Students who desire it may secure attendance in the lying-in service of the Midwifery Dispensary for periods of two weeks or more; not obligatory. From these replies it is evident that much progress is being made in this most important department of medical instruction. It appears, however, that in at least two of the largest schools of this State it is still possible for students to receive the degree of Doctor of Medicine without ever having seen a case of labor. I know that it is the desire of the authorities of these schools that at the earliest practicable moment this reproach should be removed, and I submit that it is a proper thing for the Medical Society of the State of New York to use its influence in promoting this end. For this purpose I would recommend that this Society formally requests the Regents of the University of the State to decree that an essential requirement for admission to examination in obstetrics by the State Board of Medical Examiners shall be that the candidate certify to having attended at least three cases of labor.

Improvement in Medical Education.—Time does not permit me to further analyze the methods of medical education now prevalent in this State. I think, however, that all the facts warrant the statement that positive improvement in every direction is constantly being effected; that it has already attained a breadth and thoroughness and practical value that compels the confidence of an enlightened public, and that wherever deficiencies or occasions for adverse criticism still exist, that they will gradually be removed with the lapse of time; they are the faults of youth, the results of the absence of governmental control and endowment, the effects of the spirit of individualism which is at once our pride and our weakness. It will ever remain the duty of this Society to point out the way of improvement, and to give form to the public and professional opinion which must always precede each advance step.

The State Board of Medical Examiners.—The work of this Board may now be considered as fully inaugurated. The time during which any persons desiring to practise medicine in this State were exempt from examination of this Board has now elapsed, and at the present time the only gateway to the legal practice of medicine in this State is examination by this Board. I am not aware that the two years of testing, to which this law has been subjected, has shown it to possess any objectionable features, while its influence is acknowledged by all to have been most beneficent. Up to December 1st last, 90 candidates had been examined by the Board representing this Society, of whom 80 had been accepted; 10 by the Board representing the Homœopathic State Medical Society; of whom 5 were accepted; and 5 by the Board representing the Eclectic State Medical Society, of whom 2 were accepted. When it is remembered that these were all subjected to the same examination, except in the department of therapeutics, it illustrates the direct effect of such a bill on the public welfare, since, while it caused the rejection of eleven per cent. of the candidates from schools of rational medicine, it caused the rejection of fifty per cent. and sixty per cent. of the candidates from schools of sectarian medicine. The inevitable result of the continuance of the work of this Board will be to greatly improve the general standard of medical education in this State. It is certain also to excite the antagonism of those whose pretensions are put in so bad a light by its workings. It behooves every intelligent and public-spirited citizen to protest on every proper occasion against any modification of the existing law which shall weaken its force or efficiency in any way. It would be proper for this Society at this time to adopt a resolution expressing satisfaction with the law as it now stands, and requesting that the Legislature decline to permit any modification of its provisions, for the present at least, and instructing its Committee on Legislation to be vigilant in guarding this law against amendment or attack. I accordingly recommend such action to the Society. The Society will be called upon at this meeting to nominate four candidates, from which shall be chosen by the Board of Regents two persons to fill vacancies that will occur in this Board of Examiners during the present year. Such nominations will have to be made hereafter at each meeting of the Society. Hitherto a special committee to select these names has been appointed by the President. It is evident that this places in the hand of the President a responsibility which ought not to attach to that office, and practically makes the Board of Examiners to represent the Presidents of the Society rather than the Society as a whole. The suggestion was made in the President's Inaugural Address of last year that the annual duty of selecting names to fill these regularly recurring vacancies be delegated to the regular Nominating Committee of the Society, a suggestion which seems eminently proper in view of the thoroughly representative character of the Committee. I desire to renew this suggestion at this time, and to recommend its adoption as the settled policy of the Society.

The Merritt H. Cash Fund.—Permit me to invite the attention of the Society to this fund of $500, which has been in the possession of the Society since 1862. It is a legacy left without restrictions by the late Dr. Merritt H. Cash, of Orange County, a member of this Society, who died in 1861. By vote of the Society it has been invested, and the income from it is from time to time offered as a prize to be competed for. It has been awarded eight times: "Vaccination," "Acupressure," "Artery Constriction," "School Hygiene," "Fractures of the Lower Extremity of the Radius," "Phosphorus and the Hypo-

phosphites." "The Sanitation of School Life and School-houses." and "The Caisson Disease." have severally been the subjects which have engaged the attention of the prize essayists. It perhaps may be questioned whether the use of the fund for the purpose of stimulating original work and valuable contributions to knowledge has been altogether successful. But few competitors have striven for the prize at any time, and in some instances no essay that was deemed worthy of securing the prize has been offered. It is undeniable that the temper of modern scientific work is not favorable to such prize competitions. Even if it were, the amount which this Society has at intervals offered as a prize, $100, is entirely too small to serve as an inducement for extensive research or laborious experiment in the preparation of an essay, while the honor attaching to it has not been sufficiently great to compensate for the meagreness of the money element. I would ask the Society to consider whether a better use of this money may not be made in the future. The fund, in the first place, should be increased. The interest should be allowed to accrue and be added to the principal until the fund is at least $1,000, while the Society should take measures to add another $1,000 to it, so that an annual income of at least $100 should be at the disposition of the Society. With this sum an annual lectureship could be maintained, the lecturer could be selected from among the most capable men of the medical profession in the country, who should present to the Society the results of his own observation in the fields in which he was confessedly eminent. Thus the value of the annual meetings would be greatly enhanced, and the attendance of an increased number of the profession would be attracted and rewarded. Such a lecture naturally would occupy one of the evenings of the session.

Time of Holding Annual Meeting of County Societies.—By previous Presidents attention has been called to the desirability of the adoption of a uniform period of the year at which the annual meetings of all the County Societies should be held, in order that the directory of officers and members of each Society in the "Transactions" of the State Society may be an accurate record for the current year. Of more importance, however, is the fact that often there are communications to be made from the State Society to the County Societies, requiring action by them at their annual meetings. If such annual meetings occurred at some time during the spring following the meeting of the State Society it would make such communications more direct, and would tend to promote a more intimate relation between the State and County organizations. At the present time eleven County Societies have their annual meetings in January, one in April, eleven in May, twenty-five in June, six in July, one in September, four in October, and one in November. The reasons above given would make the month of May the latest period to which the holding of the County Annual Meetings should be deferred. I respectfully suggest that this Society adopt a resolution urging its constituent County Societies to appoint this month for their annual meetings.

Attendance of Delegates from the County Societies at the Meetings of the State Society.—The steadiness with which the work of this Society has been maintained is worthy of special remark in consequence of the well-known fact that most persistent efforts were made for a number of years to alienate both individual members and whole County Societies from their allegiance to this Society. It is a subject for congratulation that with the lapse of time the feelings which prompted this action have been largely overcome by the manifest absence of the abuses or tendencies which were feared and prognosticated by some, and by the steady improvement in every element of professional character and work as fostered by the Society. Year by year County Societies which at first, after the change in the Code of Ethics in this Society, declined to send delegates, have renewed their representation, until at the present time there are very few which are not in full fellowship with this Society, so that practically now the whole profession of this State has become unified under the leadership of the State Medical Society. It is my pleasure to announce that at this present session the County of Queens, which has not been represented for some years, is again represented by its delegates, and that the claims of the State Society against it for back dues have been adjusted in accordance with the plan previously ordered by this Society.

The American Medical Association and State Representation.—I have the pleasure of presenting to this Society at this time a communication from Dr. William B. Atkinson, Permanent Secretary of the American Medical Association, transmitting a resolution adopted by that Association at its session held in Detroit, June, 1892, appointing a committee of five instructed to meet a like committee from the State Medical Society of New York, and the State Medical Association of New York, for the purpose of adjusting all questions of eligibility of members of the State Medical Society of New York to membership in that Association, and notifying this Society that the committee in question had been appointed, consisting of Drs. N. S. Davis, of Illinois; John H. Rauch, of Illinois; William T. Briggs, of Tennessee; Dudley S. Reynolds, of Kentucky; and Willis P. King, of Missouri.

The evident intention of this resolution was to request that this Society appoint a similar committee to confer with the committee named, although the resolution as transmitted does not say so. It is difficult to see what purpose such a conference as is proposed could serve. The American Medical Association is very properly its own judge of what shall be the qualifications required of its members. It is a voluntary Association, responsible to no one, and may change its standard for admission at its will. At its session at St. Paul in June, 1882, it voted that the Medical Society of the State of New York was not entitled to representation in it because the Code of Ethics adopted by that Society essentially differed from, and was in conflict with, the Code of Ethics of the American Medical Association. The status of affairs to-day differs in no respect from what prevailed in 1882, save that a year or two later the American Medical Association adopted an explanatory declaration which practically interpreted its own code to mean the same as the Code already adopted by the Medical Society of the State of New York. It did not, however, rescind the vote of disfellowship adopted in 1882, but, on the contrary, at the recent meeting in Detroit, renewed it and extended it, to embrace not only this Society as an organization but also all persons who affiliated with it. At this same meeting, also, it appointed a committee to report upon the revision of its own Code of Ethics. There is therefore no certainty as to what the future Code of Ethics of the American Medical Association will be. It would be highly improper for the Medical Society of the State of New York to assume in any way to dictate to, or even suggest to, any organization not subordinate to it, what ethical standard, if any, such an organization should adopt. It must content itself with regulating its own standards, as it now does, suggesting in turn that it is equally indelicate for organizations which have no supervising relation to it to extend advice as to its internal affairs. Practically the relations of the Medical Society of the State of New York to the American Medical Association are the same as those which it sustains to the British Medical Association, the Canadian and Ontario Medical Associations, and to the Medical Societies of the various adjacent States to which it is in the habit of sending delegates annually, viz., the relations of courtesy and comity. All these medical organizations named continue to receive with due honor and respect the delegates appointed by this Society, and doubtless whenever the American Medical Association shall signify its desire that this

Society shall again send delegates to its meetings, such delegates will be sent. The Medical Society of the State of New York, however, must meanwhile be content to do its own work in its own way, awaiting the pleasure of the Association in question. Nevertheless, since a failure by this Society to appoint such a committee as is contemplated in the communication from the American Medical Association, would doubtless be construed by many, who are still ignorant of the real relations which exist between the two organizations, as displaying a factious and quarrelsome spirit, and as a matter of simple professional comity I would advise that a committee of five be appointed by this Society to meet the committee of the American Medical Association as requested.

The Present Code of Ethics.—In the course of the discussions which have been provoked by the action of the American Medical Association just alluded to, it has come to the knowledge of your President that many of the physicians of this State are convinced that in view of the present state of general enlightenment prevailing throughout the State of New York, and the safeguards which by legal enactments are thrown about the entrance into the medical profession, it would comport more with the dignity of the medical profession, and would enhance the respect in which it is held by the general public if all specific rules of ethical conduct were elided from the by-laws of the State Medical Society, and if the regulation of such matters were hereafter left to the judgment of individual practitioners influenced by the well-known consensus of professional opinion and local custom in the places where the work of each is being carried on. Among a large number of representative physicians from all portions of the State with whom I have conferred on this point, I have found a singular unanimity of feeling on this subject. The only hesitancy which any have expressed has been as to whether it would be wise, since practically this is already the present status of the profession in this State, to make any movement looking to a formal elision of a code from our by-laws, lest it should revive acrimonious discussion, and reawaken strife that would be detrimental to the higher interests of the profession in this State. By far the greater weight of the opinions which I have been able to elicit has, however, been that no such result would follow; but that, on the contrary, such action would tend still more to heal old differences and bring together all the elements of the medical profession in this State. Such is also my own mature opinion, and further, it has seemed to me that at present, when there is a general revival of interest in the matter of professional ethics, as is evidenced by the discussions which are now going on in the medical journals of the country, and when this question of Code is again unavoidably brought to the attention of this Society, that it is a specially favorable moment for taking this final step. At the present time the only allusion in the by-laws of this Society to a system of Medical Ethics is the very brief § 8 of Chapter VI., which merely says:

"The system of medical ethics adopted by this Society, February 7, 1882, shall be considered authoritative to govern the medical profession in the State of New York."

I would recommend that this section be dropped *in toto*. The effect of such action would be to leave this State Society without any formulated Code of Ethics, and to relegate the Code of 1882, together with that of 1847 and 1823, to the domain of history, though ever remaining of interest and value to the student of the development of ethical standards in the medical profession of this State.

A National Quarantine.—First in the thoughts of both physicians and people at this time are considerations as to safeguards against the invasion of this country by cholera, the danger of which all the lessons of the past warn us is imminent. Action has already been taken by many of the County Societies of this State, urging upon Congress the enactment of comprehensive laws establishing the national regulation of quarantine. Doubtless at an early period in this meeting this subject will engage the attention of this Society and will receive thorough consideration at your hands.

It is to be hoped that Congress will not be satisfied with hasty legislation intended only to meet a present emergency, but that it will forthwith institute a committee of inquiry that shall thoroughly investigate and consider all matters pertaining to national sanitation, which shall mature a report resulting in the enactment of permanent and comprehensive laws in this department of the national welfare.

A Contribution to the Study of the Treatment of Trachoma and Vascular Keratitis by Means of Jequirity.—Dr. J. B. Emerson, of New York, gave, in this paper, the results of treatment of trachoma and vascular keratitis at the Manhattan Eye and Ear Hospital with jequirity. There were notes of 41 cases thus treated in his own practice and that of Dr. Roosa and Dr. Webster. In 12 the notes were not sufficiently complete to be of value. Of the 29 cases 28 were of trachoma and vascular keratitis. In 21 there was very marked improvement, in 6 some, in 2 none. Formerly they used an infusion, but now only the powdered bean, which was safer and surer in its action. In none had an eye been lost. Jequirity had been in use in the hospital ten years, and was regarded as one of their most valuable agents. Used with care it was not dangerous.

The Epileptic Interval: Its Phenomena and Their Importance as a Guide to Treatment, read by Dr. William C. Krauss, of Buffalo, was the title of the first paper on the discussion of epilepsy. Among these phenomena the author took up in their order symptoms relating to the eye, to the heart and circulation, to the digestive tract, the urinary secretion, sleep, etc. Variation from the normal was not infrequent with relation to the size of the pupils, their oscillation, ocular muscular paresis or paralysis, iritis, optic neuritis, rapid or slow pulse (usually rapid), functional heart trouble rather than organic change, vascular symptoms, digestive troubles, (especially from bromides), disturbed sleep, urinary contents etc. The reflexes were apt to vary somewhat from the usual.

Reflex Disturbances in the Causation of Epilepsy.—Dr. William C. Krauss, of Buffalo, read a paper on this subject. He had become a sceptic about the existence of idiopathic or spontaneous epilepsy. By reflex epilepsy he meant that form in which the irritation was not central or in the brain, but peripheral, being on or in the body. In seeking the cause, he had the patient stripped, searched for ingrowing nails, scars, trauma, worms, abnormal conditions relating to the genitals, to urination, defecation, to the teeth, mouth, throat, nose, eyes, ears, scalp. In girls, when no other cause could be found, examination should be made of the vagina for ascari. He was convinced that there were many conditions of the urethra in good boys which prompted them to bad habits, including masturbation, which led to reflex nervous troubles like chorea, neurasthenia, and epilepsy. Such cases were best treated with galvanism, bromides, perhaps surgical procedures. The stomach was a very frequent source of the reflex disturbance, for boys would be boys and eat green apples and other indigestible substances.

Mental Epilepsy.—Dr. J. Montgomery Mosher, of Ogdensburg, read this paper. Mental epilepsy implied a psychosis characterized by occasional sudden and rapid discharges by the cerebral gray matter, not necessarily attended by convulsions, nor by pathognomonic symptoms explaining the nature of the discharge. Several cases, occurring in the St. Lawrence State Hospital for the Insane, were cited. In most of them there were acts of violence in some form, the patient having no recollection afterward of the deed, or recognizing that it was done during a temporary changed mental state.

The Relation of Genital Irritation to Nervous and Mental Diseases.—Dr. L. C. Gray, of New York, then read a paper upon "The Relation of Genital Irritation, in the Male and Female, to Nervous and Mental Diseases." A careful review of the history of genital irritation was first given, dating back to the belief of Hippocrates (which has been the source of the modern doctrines upon the subject), and this was followed by a discussion, in some detail, of the literature which sprang up after the publication of Stanley's paper in 1833, as well as the further revival of the question by Sayre, in 1870.

Dr. Gray then went on to say that there was no proof that genital irritation was capable of causing any of the organic diseases of the nervous system, but that it might possibly act as an exciting or aggravating factor of certain lesser nervous diseases. In mental diseases, however, relief of genital irritation had proved, in his opinion, to be a much more valuable method of treatment than it seemed to be in the lesser nervous affections. He called attention to the fact that there were two great classes of mental diseases, namely, the organic insanities and those which were known as the psycho neuroses, and that, so far as was yet known, it was only in the latter that relief of genital irritation was of any value. He then gave the histories of several cases of insanity in which operations upon the female genitalia had given prompt and permanent relief. But he was not willing to believe that all the relief was due to the removal of the genital irritation, because simple etherization had sometimes worked almost as well, and in one case had done quite as much as the operation itself would have effected. He furthermore called attention to the fact that, if the operation upon the female genitalia was of any value at all in the relief of mental disease, it should only be done at a proper stage of convalescence. His conclusions were as follows:

1. That there is no proof that genital irritation, in the male or female, can cause nervous or mental disease, except in the predisposed individual.

2. That the proof is not yet absolute that genital irritation can produce nervous or mental disease, even in the predisposed individual.

3. That there is undoubted proof that relief of genital disease, in the male and female, will often relieve certain nervous diseases, such as migraine, hysteria, epilepsy, simple nervousness, and hallucinatory insanity.

Dr. A. Jacobi thought most cases of epilepsy, nineteen in twenty, commenced in infancy. There were many reasons for this, among them, deserving special mention, being asphyxia of the newly born.

National Quarantine Recommended.—Dr. Suiter read the report of the Special Committee appointed at the last session to communicate with Societies in other States as to the advisability of establishing a Federal Health Board. The Committee had found almost unanimity of opinion in favor of national control in some form. The steps already taken in Congress with regard to cholera and quarantine were reviewed, and it was recommended that a committee be appointed to co-operate with that already appointed by the New York Academy of Medicine, and urge quarantine which should be completely under national control. The same reasons, however, which made so necessary central control of quarantine relating to diseases which were liable to be introduced from without, applied with even greater force to diseases liable to arise within the States, and it was desirable that there should be a National Health Board in some form. On motion, a committee was appointed to act with that which had been appointed by the New York Academy of Medicine, and telegrams were sent to Congress and the President favoring national quarantine.

Lithæmia: Its Treatment.—Dr. R. W. Wilcox, of New York, read a paper on this subject. After some general remarks upon the nature of lithæmia, the author took up the detail of treatment. He differed from English physicians, and permitted the judicious use of meat. There were two types, which required different treatment: the obese with dyspeptic symptoms, and the wiry, thin neurasthenic. While it was necessary to study cases individually, especially as to their digestive peculiarities in prescribing diet, yet in general meat in some form and in limited quantity was required, some green vegetables, the use of plenty of fluids, especially of lithia water. The fluid should not be taken in considerable quantity during meals. Pork, cheese, oily foods and rich pastry, gravy, and tea should be avoided. Alcoholics could be used only with care. There should be thorough mastication, exercise in open air; nervous persons did best usually at the seaside, and should be much in the sunshine. The indications for other alkaline waters than lithia, for catharsis or laxatives, etc., also received attention.

The Registration of Midwives.—Dr. J. L. Kortwright, of Brooklyn, read this paper. The report of the Board of Health in Brooklyn showed that fully one-third of all cases of confinement were attended by midwives. Most of those whom they attended were poor, and they were selected because they performed the services of both midwife and nurse. It was shown they attended two-thirds of still-births, a large percentage, while of septic cases only one fifth of those reported were attended by midwives. The author thought that, owing to the importance of the duties devolving upon midwives, they ought to be required by State law to pursue a certain course of study on medical subjects relating to their profession, and to pass a special examination besides being required to register as at present.

Dr. Hopkins, of Buffalo, said that in his county midwives were required at present to pass an examination, he being one of the examiners. The effect of such examination had been shown to be beneficial.

The recommendations contained in Dr. Kortwright's paper were referred to the Committee on Legislation.

Certain Types of Septicæmia Resulting from Abortion.—Dr. Andrew F. Currier, of New York, read a paper with this title. Abortion was by far the most common cause of puerperal sepsis. The immediate cause of sepsis was the staphylococcus pyogenes aureus or albus. He made three varieties: mild cases, severe cases, and the uncontrollable. A further division was made of the latter variety into those in which the toxic element predominated, and those in which the inflammatory element predominated, the latter being the more amenable to treatment. Treatment related to the judicious use of the curette, uterine and vaginal irrigation, oxygen inhalation, alcoholic stimulants, fluid nourishment, turpentine, enemata. The enemata should not be too concentrated nor too frequently used, but when employed judiciously they were very beneficial, and probably destroyed intestinal bacteria. In a third group the septic process acted with great rapidity and the intra- and extra peritoneal suppuration was both diffuse and abundant. The only possible hope here was abdominal section, and this one was very slender. It would be observed that the author spoke of septicæmia as a disease and not as a symptom.

Gauze Tamponade of the Puerperal Uterus.—Dr. C. A. Von Ramdohr, of New York, read a brief paper on the manner of introducing the gauze tamponade into the puerperal uterus, and presented a neat and compact metallic cylindrical case for carrying the gauze roll and keeping it aseptic.

The Relative Value of Certain Obstetrical Operations.—Dr. Egbert H. Grandin, of New York, who had had the arrangement of a general discussion upon this subject, read an introductory paper entitled

General Review of the Operations to be Discussed.—The subjects chosen by Dr. Grandin had been embryotomy, Cæsarean section, and symphysiotomy. To-day two lives were often saved where formerly it was tried only to rescue the mother, who might also be lost. It was necessary only to mention the change which had been effected by asepsis and antisepsis, also by the improved uterine suture in Cæsarean section. Especial

stress should at this time be placed upon accurate pelvimetry, which was so necessary to a proper selection of cases for the several forms of procedure. There were few cases at the present day in which sacrifice of the living fœtus could be considered justifiable. Cæsarean section under favorable conditions had come to be not much more dangerous than embryotomy usually proved to be. Symphysiotomy was on trial.

The Limitations of Embryotomy.—Dr. J. Clifton Edgar, of New York, read the paper. The supposition that Cæsarean section had come to be as safe for the mother as embryotomy was a mistake, and was due probably to comparing statistics of embryotomy of pre-aseptic days with the recent best results of Cæsarean section. The removal of the bones of the head, piecemeal, was a dangerous procedure. The indications for embryotomy were considered under two heads: 1, on the living fœtus; 2, on the dead fœtus. Embryotomy on the dead fœtus was demanded when the absolute indication for Cæsarean section was absent, and extraction of the fœtus increased the danger to the mother because of the small size of the pelvis or large size of the child, or because of deformities of the fœtus, and obstructions of the mother's soft parts.

In cases in which the conjugate was much under two inches and five-eighths, in exostosis, cancer, and some other conditions cœliotomy was to be preferred whether the fœtus were dead or alive; also where the mother's condition demanded rapid delivery. Embryotomy upon the living child was indicated whenever the physical signs showed practical loss of the fœtus, also in certain rare instances where the condition of the mother showed dangerous thinning of the lower uterine segment, which would make embryotomy safer than cœliotomy; also in conditions of monstrosity in which the fœtus would obstruct labor.

The Limitations of Cæsarean Section.—Dr. Robert A. Murray, of New York, discussed this subject in an abstract of a paper. In each case one should learn the size of the pelvis, of the child, the history of the case, the condition of the skin and kidneys, the expected time of delivery, the question of doing an elective operation. The author believed the chances for success from Cæsarean section in favorable cases should be as good as in ovariotomy, if not better. Usually the dangers were only three: from shock, hemorrhage, and sepsis. These dangers could be reduced almost to the minimum. He preferred to do the operation before labor. He would open the uterus *in situ*. The operation should be done in pelves under about two and three quarter inches, generally contracted pelvis, and certain special deformities named tumors and cancer of the cervix. In cancer the operation should always be done before labor, otherwise the patient would soon die. The author impressed the necessity for practising pelvimetry. It was interesting to note that children at birth were larger in this country than in Europe.

In pelves slightly above two inches and a half he now held his opinion in abeyance as to whether cœliotomy or symphysiotomy should be done. A few nights ago he divided the symphysis in a case of contraction down to two inches and three-fourths, the symphysis was separated three inches, yet the child was extracted with great difficulty.

The Anatomical Limitations of Symphysiotomy.—Dr. J. E. Kelly, of New York, read this paper, which was illustrated with diagrams. Among the points demonstrated were: the separation of the symphysis implied an outward rotation of the os ilium at the sacro-iliac junction with enlargement of all the diameters of the pelvis, the greatest being in the oblique, the next in the transverse, and least in the antero-posterior diameter. This could be shown by drawing a triangle, with one angle at each of the sacro-iliac junctions and one at the symphysis. It would not help matters to leave the subpubic ligament intact, as in that case the ilium would only turn outwardly above, while inferiorly the outlet would be narrowed. The author would prefer division from above down, and from before back, instead of from below up and from behind forward. Reference was made to division through the bony part as had been done in one or more cases.

The Clinical Limitations of Symphysiotomy.—Dr. Charles Jewett, of Brooklyn, discussed this subject in a paper. A brief historical and statistical outline was given. The greatest contraction in which symphysiotomy was permissible was two inches and a half for the flattened pelvis and head of average size. The degree of mobility of the pelvic bones was not always the same. He regarded symphysiotomy properly conducted as safer than difficult forceps delivery. Not infrequently death, cerebral damage, or a crippled state followed the latter. Fear had been expressed by some that symphysiotomy was liable to be practised where version and forceps would answer. He believed there was greater danger of the reverse taking place, that forceps and version would be oftener resorted to where symphysiotomy was the better procedure.

Clinically it did not matter what diameter was shortened, it would be increased by separation at the symphysis. Symphysiotomy was much safer than cœliotomy after protracted labor.

Dr. E. P. Davis, of Philadelphia, opened the verbal discussion on the several papers. He impressed the practicability of teaching pelvimetry to students at the bedside. A case of embryotomy on the living hydrocephalic child was related to show that when deformity of the fœtus in one regard could be determined before birth, it was likely other deformity existed which made the sacrifice of life of probable slight importance. Lesser degrees of pelvic deformity and contraction were not uncommon in Philadelphia. He mentioned a case of symphysiotomy in Philadelphia, on a woman whom Dr. Kelly had once delivered by Cæsarean section.

Dr. H. A. Kelly, of Baltimore, praised the work done by Dr. Harris, in connection with symphysiotomy. He thought the metric system should be employed to designate the pelvic measurements. According to his observation, the flattened pelvis was not so unusual in this country. Gynecologists should study the influence of obstetrics in the production of gynecological cases. Very often physicians expected to have to interfere in labor, when the contraction really proved sufficient only to somewhat interfere with normal labor. They, however, usually made a correct diagnosis in cases of extra uterine pregnancy. Dr. Kelly then presented some old works describing earlier cases of symphysiotomy.

Dr. Edward Reynolds, of Boston, thought accurate pelvimetry was possible only for the specialist, but in his hand it gave knowledge of extreme value. Even of greater importance was an estimate of the size of the child. A pelvis of two and a half inches conjugate diameter was not likely to pass a living child. One should assume with caution that in any given case the child could not pass without surgical aid, at least until after careful measurements. In doubtful cases he would watch the case at labor and not choose elective Cæsarean section. One could not judge of primary union after symphysiotomy simply by the patient's ability to walk well.

Dr. H. J. Boldt, of New York, thought that symphysiotomy, having become the fashionable operation, it was liable to do harm by being employed by the inexpert and in improper cases. Referring to Dr. Currier's paper, he expressed the opinion that acute general septic, purulent (not local) peritonitis would die whatever the treatment. He had removed the uterus in one such puerperal case, yet the patient died of the sepsis.

Dr. Von Ramdohr, of New York, ridiculed the idea that even the specialist could measure the pelvis in the living within half a centimetre, or even a centimetre. He thought symphysiotomy was still *sub judice*.

Dr. A. H. Buckmaster, of New York, discussing sep-

tic peritonitis, expressed the opinion that some cases died from intestinal paralysis induced by the irritating effects of salines whose use had been abused. He did not believe in instrumental pelvimetry; the hand was most reliable. He thought symphysiotomy had been established in certain cases.

To Reduce Sepsis.—Dr. Edward N. Liell, of New York, discussing Dr. Currier's paper, impressed the need of curetting the uterus with the sharp instrument, the uterus being pulled down and its cavity thereby straightened during the operation; then irrigate and drain by gauze strips. This would lessen the sepsis.

Dr. Van Cott referred to three cases of autopsy on children in which meningeal hemorrhage was found.

Evening Session.

Rare Monstrosity.—Dr. R. J. Wilding, of Malone, presented a monstrosity of a child which, perhaps, was unique. Below there seemed to be two vertebral columns, rudimentary feet of two, one navel, some rudiment of the genitals, no head. It was a quadruple pregnancy, the monstrosity comprising two, while the other two were normally formed children. There was no history of maternal impressions.

Practical Antisepsis and Asepsis.—Dr. Howard A. Kelly, of Baltimore, threw on the screen photographs of operating-rooms, steps in operations, and the aseptic steps in detail taken at Johns Hopkins's, for conforming in the strictest way to the demands of modern asepsis and antisepsis based on bacteriological studies. The photographs had been taken by a gentleman of leisure, Mr. Murray, who had devoted much time and skill to their production. They used steam, not dry heat, in sterilization, and silk and silk-worm gut for ligatures.

Epitaphs from the Tombstones of Medical History.—Dr. Joseph H. Hunt, of Brooklyn, read the paper, with stereopticon projections of many old and rare medical portraits.

Microphotographic Demonstrations of the Biological Characters of the Cholera Spirillum.—Dr. George M. Sternberg, U. S. A., demonstrated these by the stereopticon.

A vote of thanks was tendered to the three essayists and to Mr. Murray, for their very instructive and entertaining demonstrations

Second Day, Wednesday, February 8th—Morning Session.

Report of Committee on the President's Address.—Dr. Vander Veer read the report. It recommended the following: That the Society formally requests the Regents of the University of the State to decree that an essential requirement for admission to examination in obstetrics by the State Board of Medical Examiners shall be, that the candidate furnish proof, through his preceptor or the professor in obstetrics in the school from which he graduated or matriculated, of having attended at least three cases of labor.

That the Society expresses satisfaction with the law establishing a State Board of Medical Examiners as it now stands, and requesting that the Legislature decline to permit any modification of its provisions for the present, at least, instructing its Committee on Legislation to be vigilant in guarding this law against amendment or attack.

The Committee recommend that the candidates for vacancies in the State Board of Medical Examiners be selected by a committee of five, appointed by the President of this Society at each annual meeting, and that this be enacted as a standing rule.

Your Committee, after mature deliberation, taking into consideration the manner and character of the Merritt H. Cash bequest, recommend that it be devoted, as heretofore, to prizes.

That it is the sense of the Society that the variou County Medical Societies be urged to hold their annua meetings in the month of May of each year.

That the Society reserves to itself the right to punish its members for any unprofessional conduct.

The determination of what shall be considered unprofessional conduct shall rest with the Society. If at any time charges are preferred against a member of the Society, these charges shall be referred to a committee which already exists for a similar purpose. This rule shall take the place of paragraph eight of chapter six of the by-laws, as well as the rules adopted by this Society in February, 1882.

Resolved, that the Society deems it unwise, at this time, to appoint any committee of the American Medical Association upon the subject of medical ethics, as requested by that distinguished body; but the Society ventures to express the hope that the American Medical Association, at no distant day, will take such action as will remove the merely technical obstacle to the most cordial co-operation between the two societies.

The report was signed by Drs. Vander Veer, Roosa, Suiter, Elsner, and McNaughton, and was adopted unanimously as a part of the by-laws of the Society.

Report of the Committee on Legislation.—Dr. Maurice J. Lewi, of Albany, read the report. The work of the committee had been preventive more than creative. It had, and still required constant watchfulness to preserve the excellent laws relating to registration and State examination. The committee requested power to appoint an auxiliary committee to aid them in their work. The medical colleges of the State were now uniformly, it seemed, in favor of upholding the medical laws as they at present existed.

The Society should oppose granting charters for new colleges except under stringent regulations by the regents. We should seek to raise the standard of the medical education rather than increase the number of doctors, of whom there was an excess.

The undertakers had been opposed to a law prohibiting the use of poisonous embalming fluids, as non-poisonous were costly. Some thought this objection would be overcome.

County societies and individual physicians were urged to aid local health boards and to have bad laws revoked, to seek the appointment of as many physicians as possible on such boards, etc. There was a bill before the Legislature which should be supported by all, intended to modify the manner in which a physician's testimony could be taken, and not compelling him to waste time in courts.

The course of medical colleges in this State had been increased by the faculties to three years, an effect of the appointment of a State Medical Examining Board, and at least one college had lengthened the course to four years.

The Management of Suppuration Complicating Tuberculous Disease of the Bones and Joints.—Dr. V. P. Gibney, of New York, who had had the arrangement of this discussion, opened it by a paper. His summary was: Protect the joint about which the bone disease existed in the early stage; in the later stages where abscess was not removed aspirate or incise; in cases where the suppurative process was confined to a small area it was good surgery to leave the small abscesses alone and use protective apparatus; it was good practice to aspirate where the abscess was in the way of proper adjustment of the apparatus. By such measures we could expect good results in at least fifty per cent. of the cases. Simple incision of abscess owed its success to limited extent of the bone lesion. Excision of the hip was not to be employed in all cases of extensive suppuration, but must depend largely upon the condition of the patient, etc. Expectant treatment for disease of the ankle in children yielded the best results. Amputation at the thigh in these cases was never justifiable, though where the liver had become diseased in hip-joint cases amputation here

might be indicated. In vertebral disease a fixation splint was better than the knife.

Dr. Roswell Park, of Buffalo, read a paper on the same subject. In acute abscess he would incise it; as to iodoform injections, some cases in which they had been used had come to operation at his hands in which the powder was found impacted about the joint. The cases which did well with this drug would probably have done well by mechanical treatment alone. He would prefer to try zinc chloride. He was constantly getting benefit from tuberculin, and also gave guiacol, and employed besides whatever surgical procedure might seem indicated. As to cold abscess, he had for several years claimed the contents were not pus, and evacuation, unlike in acute or pus abscess, was not so necessary unless an acute process became engrafted upon it and caused real suppuration.

Dr. Henry Ling Taylor, of New York, read the next paper on this subject. Methods of mechanical treatment were reviewed, and he said the need of it in some form was acknowledged by all, while some difference of opinion existed as to the opening of abscesses. He approved of incising cold abscesses and injecting iodoform, while he thought poorly of the aspirator.

Dr. Louis A. Weigel, of Rochester, read a paper on the same subject. He cited some cases, especially of tuberculosis of the ankle-joint in children, in which he operated, and the patient's condition at once changed for the better, and recovery ensued. Combined surgical and mechanical treatment gave better results than either alone. He claimed time was important in joint diseases of children, as in older persons, and was one reason why surgical treatment should be undertaken.

Dr. Hasbrook had found iodoform in tubercular joint disease useful; not so in abscess following trauma.

Dr. Herman Mynter, of Buffalo, emphasized two points, namely, prevent the occurrence of abscess by early appropriate treatment; if abscess had occurred in the joint iodoform-glycerine emulsion would prove beneficial in many cases. Failures would be greater where only the external abscess was treated, not going to the affected joint or bone.

Dr. Samuel Lloyd, of New York, was surprised at the conflicting opinions as to the value of iodoform, and would attribute it to failure to prepare the emulsion fresh. Much better results were obtained where, in addition to curetting the sinus or abscess one afterward used sponges or Treve's method. He doubted the value of Lanalongue's method of seeking to produce tubercular encapsulation.

An invitation to visit the Governor at 5 P.M. was accepted.

Recommended for Positions of State Medical Examiners.—The Committee named the following from whom the Regents should fill vacancies in the State Medical Examining Board: Drs. William C. Wey, George R. Fowler, A. Walter Suiter, and William Maddren.

The Present State of Knowledge of Carcinoma.—Several papers were read upon this subject, the first by Dr. H. C. Coe, of New York.

He touched lightly upon the parasitic origin of the disease and the mode of its development. He called attention to the importance of distinguishing between direct extension and extension through the lymphatics, or true metastasis. The term cancerous cachexia should be discarded, since the cachexia was the same as in many constitutional diseases. He believed thoroughly in local prophylaxis; an operation should not be put off; early and complete removal was a clear surgical indication. Patients must be educated to this view. Suppuration had sometimes even acted beneficially by destroying outlying cells after excision. There could also be no question of the beneficent effects of surgery as a palliative measure. The author expressed admiration for those who had patiently studied the pathology of cancer.

The Etiology of Carcinoma.—Dr. Roswell Park read the paper. The various theories and observations upon this subject, especially those based on microscopical and parasitic study, were reviewed. Many conflicting statements had yet to be reconciled regarding the parasitic theory, but he felt that we were on the eve of a great discovery in this matter.

The Value of Internal Medication in the Treatment of Carcinoma.—Dr. Jarvis S. Wight, of Brooklyn, read a paper on this subject. Internal medical treatment was not intended to supplant, but simply to supplement, surgical treatment where the latter was practicable. He had for a number of years tried various agents, including bichloride of mercury, iodide of arsenic alone and in combination with the iodide of iron and iodide of potassium, carbonate of potassium, and bromide of arsenic. The latter—bromide of arsenic—had proven most useful, and he gave it in all inoperable cases, and also in those operated upon for some months afterward. Of the latter class there had been no return in some, it being four to six years after the cancer had been removed. The diagnosis had been established by the microscope. The drug had also given marked relief of symptoms in incurable cases of internal cancer.

The Results Obtainable from the Use of Aniline Products in Carcinoma.—Dr. Willy Meyer, of New York, traced this form of treatment since it was begun a few years ago by V. Mosig, of Vienna. He had ceased to use fuchsin, and employed only the blue dyes, pyoktanin. Unless strict asepsis or antisepsis were observed, the local treatment would likely cause infection and do harm.

Internal administration by gelatin capsules might be indicated, methyl blue then being best. The patient should be informed that it would stain the urine blue; as a result of local treatment subjective and objective symptoms arose. The diminution of pain was one of the most beneficial effects, as it enabled the patient to sleep and recuperate, and did away with the necessity for morphine. Used not too strong the applications caused breaking down and disappearance of the cancerous deposit. Some cases of complete cure had been reported, but he had only observed more or less benefit.

The author referred to the belief of Adamkiewicz that the so-called cancer-cell was really a parasite, that it produced a toxic called cancerine, which was perhaps identical with neurine, which latter had been made chemically by Merck.

Dr. Meyer thought patients with cancer should be treated and given encouragement although known to be beyond reach of the knife. He hoped the example of the French would be imitated, and an American League Against Cancer would be organized.

Caustics in the Treatment of Carcinoma.—Dr. Daniel Lewis, of New York, read this paper. Mild caustics should not be used; they excited the disease after a time to a more virulent course. In recommending the caustic treatment he referred only to cases in which the integument was involved. He disapproved Marsden's paste, and used, according to the indications, caustic potash (cocaine two parts, caustic potash six parts, vaseline eight parts), lactic and sylic (not salicylic) acid, and Bougard's paste, which should be freshly and specially prepared to be efficient. Powders were condemned.

The Knife in the Treatment of Carcinoma.—Dr. N. Jacobson, of Syracuse, read the paper. Recent study had only emphasized the infectious character and primarily local origin of cancer, and that to effect its cure it must be early and completely removed. The paper was devoted to the application, in detail, of this principle to cancer of various parts of the body.

Afternoon Session.

An Auxiliary Committee on Legislation.—On motion of Dr. R. W. Wilcox, the Committee on Legislation was given permission to appoint an auxiliary committee.

Against Abolition of Capital Punishment.—Dr. A. Jacobi, of New York, one of the members upon a special committee which has been continued from the two previous sessions, read an additional report to the one presented last year, giving further facts and arguments of a medical nature in favor of abolition of the death penalty. The committee submitted a resolution recommending legislation in accord with the report. The resolution, however, was voted down by the Society.

An Epileptic Colony.—Dr. Angell offered a resolution indorsing the project of the State Board of Charities to have the State establish an epileptic colony to be situated in Livingston County.

Dr. Suiter read the report of the committee on the Pan American Medical Congress.

Newer Methods of Diagnosis and Treatment of Stomach and Intestinal Diseases.—The following papers in discussion of this subject were read: Dr. Henry L. Elsner, on "The Practical Value of the Newer Methods of Examination in the Diseases of the Stomach, with a Consideration of the Indications given for Diet and Treatment by such Examinations;" Dr. J. Fuhs, on "The Methods of Obtaining and Examining the Contents of the Stomach in Disease for Purposes of Diagnosis;" Dr. C. G. Stockton, "The Disturbances of the Motor Function of the Stomach; their Diagnosis, Symptoms, and Treatment;" and one by Dr. Max Einhorn on "The Physiological Effects of Electricity in the Stomach, the Indications for its Administration and Use in Gastric Disease, and the Methods of Use."

Dr. Elsner's papers included responses to questions, by Lister, Billroth, and numerous eminent European and American surgeons and some physicians, most of whom testified to the value of examination of the stomach contents in further aid of diagnosis, but none had relied entirely on the results of such examination (without corroborative evidence) in deciding to operate for cancer of the stomach.

Dr. Fuhs thought the methods of examination were simple enough for all practitioners to avail themselves of this means in diagnosis.

Dr. Stockton mentioned cases of spasmodic contractions of the stomach, of general dilation, of relaxation of the cardiac or pyloric openings, the consequent symptoms and their treatment. Electricity was beneficial in many cases.

Dr. Einhorn had found benefit from direct electrization of the stomach in several conditions, particularly gastralgia, and also cardiac symptoms combined with gastric.

Evening Session.

The Evolution of the American Surgeon.—The President, Dr. Pilcher, chose the above subject for his address. It was but natural, he said, that an assembly of medical men, sharing in the general epidemic influence of the Columbian year, should review with special interest the condition of their own profession at their particular period of the world's history. It was his purpose, however, to invite attention to only one of the great branches of the healing art, the surgical, during the Columbian era, and more especially of American surgery.

The character and attainments of the physicians of an age or nation in a particular degree was always an exponent of the average character and attainments of this (the middle) class, plus the added refinement and elevation of character which the pursuit of medical study and practice inevitably attached to its devotee. The civilization of Greece which produced Pericles, Socrates, and Plato, added further lustre to its record by the birth and teachings of Hippocrates. The same was true of the golden age of Rome and Marcus Aurelius, whose teachings determined medical thought for fourteen hundred years. The quickening thought, the broken barriers, the elevation of the common people that followed the French Revolution made the French medical profession of fifty years ago to lead the world, resplendent as it was with the names of Larrey, Dupuytren, Laennec, Louis, Velpeau, and a host of others. In a word, the medical profession was peculiarly "of the people, by the people, and for the people." Medical men came nearer to the heart of the people than did men of any other calling. What should be the standard of their attainments was a matter that was largely self-regulating, especially among an intelligent people, in accordance with the great principle of demand and supply.

The Columbian period was not distinguished by any pre-eminent name in surgery, nor by any epoch-making discovery. It contained much of interest, however, to the student of the evolution of surgery, in the indications which were already discernible of the brilliant achievements of the succeeding century. The Italian universities at Bologna, Padua, Pisa, and Ferrara were crowded with students from all parts of Europe.

Passing further along in the address, it was stated that the worthies of the fifteenth century had faded from our vision, and in their place arose Warren, Bigelow, Mott, Parker, Wood, Hamilton, Sands, Sims, Physick, McLellan, Pancoast, Gross, Agnew, Brainard, Gunn, Parkes, McDowell, Dudley, and a host of others, who within the last hundred years upon this continent, by their lives and work had contributed to the development of a type of work and of workers in surgery, which might properly be called a distinct school, that of American surgeons. The sense of personal worth, the contempt of tradition and of conventionalities, the self-reliance, the adaptability to circumstances, and the ability to shape circumstances to conform to wishes, the stimulating climate, the fertile and responsive soil, the prevailing religious tone, the regard for learning, the pride of citizenship and of sovereignty, these among other influences had contributed largely to the development of a special type of manhood in the New World. Among such a people it was inevitable that a new type of physician should arise. Here no vagary so wild, no pretension so preposterous, but that it had been afforded a hearing, and the principle that every individual should be permitted to choose his own medicine as well as his own religion, had been permitted its full sway. The President then took up special lines of surgery in which certain men had distinguished themselves.

It could truly be said that the surgeon of to-day was a physician in the broadest sense of that term.

A vote of thanks was tendered the President for his able, interesting, and instructive address.

The Society then adjourned to partake of the annual dinner at the Delavan.

Officers Elected —*President*, Herman Bendell, of Albany; *Vice-President*, C. L. Stiles, of Oswego; *Secretary*, F. C. Curtis, of Albany; *Treasurer*, C. H. Porter, of Albany; *Committee on Arrangements*, H. Hun, S. D. Powell, N. J. Nealis; *Committee on By-Laws*, H. D. Wey, A. F. Simmons, F. C. Curtis; *Committee on Hygiene*, C. E. Bruce, A. N. Bell, D. S. Burr, Louis Balch, D. W. Peck; *Committee on Legislation*, D. B. St. John Roosa, Daniel Lewis, O'Leary; *Committee on Ethics*, John S. Warren, Charles Jewett, Eugene Beach; *Committee on Publication*, F. C. Curtis, W. W. Potter, F. D. Bailey, C. H. Porter; *Committee on Credentials*, W. B. Chase, C. M. Culver, J. P. Creveling.

(To be Continued.)

American-electro Therapeutic Association.—At the second annual meeting of the American-electro Therapeutic Association, the following officers were elected for the ensuing year: *President*, Dr. Augustin H. Goelet, 531 West Fifty-seventh Street, New York; *First Vice-President*, Dr. William F. Hutchinson, Providence, R. I.; *Second Vice-President*, Dr. W. J. Herdman, Ann Arbor, Mich.; *Secretary*, Dr. Margar t A. Cleaves, 68 Madison Avenue, New York; *Treasurer*, R. J. Nunn, 119 York Street, Savannah, Ga. The third annual meeting will be held in Chicago on September 12, 13, and 14, 1893.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Meeting of January 26, 1893.

EGBERT H. GRANDIN, M.D., AFTERWARD H. J. BOLDT, M.D., IN THE CHAIR.

Election of Officers.—Dr. H. J. Boldt was elected *Chairman*, and Dr. J. Clifton Edgar, *Secretary*, for the ensuing year.

A Successful Case of Symphysiotomy.—DR. H. J. GARRIGUES related the case. He had been called to see the patient by Dr. Murtland, December 30, 1892. She had been in labor since early morning. The cervix was half dilated and entirely dilatable, the waters unbroken. There was general contraction of the pelvis, and labor pains had stopped Toward evening he performed symphysiotomy and extracted the child by turning. It weighed seven pounds and a half. It is now in excellent health. The mother was afterward very sick in consequence of metritis and nephritis, but had almost completely recovered. It was a tenement-house case, and it was impossible to tell what was the exact source of infection. The patient could now walk without a bandage or support, and her gait was entirely normal. There had been no infection of the wound, and the symphysiotomy itself had been an undisturbed success.

His incision had been four inches long, ending three-quarters of an inch below and to the left of the clitoris, and was made with a sharp-pointed convex scalpel, while the tissue behind the symphisis was separated from the latter by a common director, which he afterward withdrew, and replaced by a concave blunt-pointed bistoury, the latter being used to divide the symphysis inclusive of the suprapubic ligament from behind forward and from above downward, while an assistant held the urethra to the right side. He thought this small knife preferable to Galbiati's falcietta, which Morisani, of Naples, used, and which was much larger. There was no necessity for cutting from below upward, and it was doubtful whether there was any preponderating advantage in cutting from behind forward, whereas the cartilage could be more easily struck from in front. As serious bleeding exclusively took place at the lower end, it was best to go from above downward.

Dr. Garrigues presented a bandage used later in the case, also the instruments employed, and two pelves. The first pelvis was that from his first case of Cæsarean section, and was of that rare form, the kyphotic. In it symphysiotomy could not have been performed, for both ilio-sacral joints were diseased, and the symphysis going in a zigzag line would have prevented the passage of the knife. The other was a generally contracted pelvis of the male type, corresponding in every way to that in his case of symphysiotomy. It was a dangerous type, and the most common one in Americans.

As far as he knew, this was the first case of symphysiotomy in New York.

DR. H. L. COLLYER suggested that the origin of the sepsis might have been in the sacro-iliac joint, if there were much separation. He had once the after-treatment of a case of labor in which this was the origin of an abscess, and the separation at the sacro-iliac joint was such that motion was quite perceptible. There was three-quarters of an inch separation at the pubic symphysis.

DR. VON RAMDOHR said that according to his experience the generally contracted or male type of pelvis was not the most common in this city. He had seen as many as eighty cases requiring interference, not of marked deformity, however, and in nearly all it was a kind of rachitic flattened pelvis. Symphysiotomy was destined to become a very important operation in this country, but there was great danger of young and inexperienced men undertaking it in cases of even only slight contraction, where patience and obstetrical skill would effect delivery without a surgical operation. That it was attended by danger was shown in the fact that even as careful a man as Dr. Garrigues came near losing his patient from sepsis.

DR. GRANDIN thought the field for symphysiotomy would yet prove to be a limited one. He was not inclined to regard it as free from risk, as some had taught. As the last speaker had said, it was likely to be resorted to in some cases in which version would effect delivery.

DR. EDGAR said that out of thirty-three hundred cases of tenement-house labors, mostly among immigrants, in this city, the last three years, they had not met with one case of absolutely contracted pelvis. He believed symphysiotomy had an important future. If it should not here prove a serious operation, we would be able with it to avoid many cases of still-birth from contraction of about three and a half to three and a quarter inches.

DR. DICKINSON asked whether version had not proven difficult and incurred danger to soft parts after symphysiotomy.

DR. R. A. MURRAY said that version in a pelvis of less than three inches and a half was almost certainly fatal to the child, and symphysiotomy promised a great deal for such cases. It offered an increase not only in the transverse diameter, but also some antero-posteriorly. But the pelvis and head of the child should be first well measured. In this country the child was usually considerably larger than in Europe. He also thought symphysiotomy was an operation only for the expert.

DR. GARRIGUES said in some closing remarks that six centimetres was a safe amount of separation between the pubes, or two inches and a half. All the diameters were elongated by the separation. Version was not difficult. Where the waters were broken, the rule was to try forceps, not turning. Symphysiotomy should not be done after turning. In this case it was done before. Babies at birth in Europe averaged six to seven pounds, in America seven to eight.

The Treatment of Purulent Puerperal Peritonitis.—DR. EGBERT H. GRANDIN read the paper. Some years ago it was the custom to treat puerperal peritonitis by opium, and he employed this method in half a dozen cases and all died. Later, six or seven years ago, it became the custom to treat the same class of cases by the so-called saline method, and he used this in a number of cases and they also promptly died. Recently he had resorted to abdominal section with results which the following four cases would illustrate. In all there were marked symptoms of peritonitis, which had followed delivery, and a fatal result was evident on lines of treatment already being pursued when he was called in consultation. In the first, he found on opening the abdomen a large abscess cavity occupying chiefly the left side, and communicating with the uterine cavity probably through the tube. The abscess cavity was washed out and drained through the uterus. It was evident he had to deal with a localized purulent peritonitis complicated by general peritonitis. The woman recovered. It was not possible to say whether there had been previously a pyosalpinx, or whether infection had taken place through uterine injections or other means.

In the second case he found a general purulent peritonitis, washed out the abdomen, but the patient died. It seemed likely there had originally been a pyosalpinx which had ruptured. The third case was very similar; there was general purulent peritonitis, and the patient died. In the fourth case he felt fluctuation in the region of the left broad ligament and over Poupart's ligament was a boggy tumor. When opened it was found to contain pus and urine, and communicated presumably with the left broad ligament and bladder. The patient was enabled by the operation to shake off her general sepsis, the abscess cavity became shut off from the bladder and had now about healed, and the patient was out of bed.

Dr. Grandin said that, notwithstanding the high mortality in these cases, he was not ashamed of the result,

since by former methods it would have been one hundred per cent. instead of fifty. He believed the uniformity of death in the cases of acute general purulent peritonitis must be due to general systemic infection preceding the general peritonitis, and that the operation failed of its purpose because the larger volume of sepsis was not removed. Here the origin had probably been through the lymphatics, whereas in local purulent puerperal peritonitis it was by direct extension from the uterus or a ruptured abscess cavity, and when the principal source of infection, the abscess, was attacked, the system was enabled to shake off the scattered poison. Notwithstanding the fact that patients seemed doomed in any event when general purulent peritonitis had developed, yet he was in favor of laparotomy, since one could not say beforehand that the purulent collection was not local. No possible aid should be neglected for making an early diagnosis, and then an operation should be done at once.

Dr. Von Ramdohr said that all would agree in the desire to open a local collection of pus if it was known to be present, whatever might be its location, and he said if we could find pus let us evacuate it, but in general purulent puerperal peritonitis the patient would die anyway, and if it were not purulent she would get well under alcohol. We could not diagnosticate between general purulent peritonitis and a peritonitis which was not purulent if a local collection of pus could not be felt. In such cases he would not operate, but, as said, use stimulants.

Dr. Vineberg also thought that unless a collection of pus could be felt beforehand we would hardly be justified in doing laparotomy.

Dr. Edebohls's views were in accord with those of the author; still, he had had occasion to perform cœliotomy for general puerperal purulent peritonitis in three cases, and all the patients died, not as a result of the operation, but in spite of it. The result was different when there was local pus.

Dr. Collyer thought the author's paper a valuable one, although the views expressed were probably in advance of the age. They would excite criticism and also do good by stirring up practitioners and specialists to the early recognition of the cases and to greater care by way of prevention.

Dr. Garrigues knew of no way to tell whether the case was one of purulent or non-purulent peritonitis, and if purulent whether it were local or general unless a collection of pus could be felt, and in this event all would agree that it should be cut into. He called attention to a paper once read by him narrating thirteen cases of puerperal peritonitis treated by Clark's opium plan and seven recovered.

Dr. Boldt thought the question of opening the abdomen depended upon the variety of peritonitis. If the pus were local, of course one should operate. There was a class of cases in which the uterus was large and flabby, and the temperature ran a characteristic course, in which he thought it would be proper to do vaginal hysterectomy and thus remove the chief source of infection.

Dr. Grandin said, with regard to general purulent puerperal peritonitis, that in the cases seen by him there were foci of pus throughout the entire peritoneum, besides general sepsis, and it was impossible to cure the patient by alcohol, opium, or salines. Nor would these agents answer in localized purulent peritonitis, and since the latter might exist where the former was suspected, he thought one justified in opening the abdomen.

The Brain of the Late General Butler is said to have weighed sixty-two ounces. This places it very high in the list of historic and heavy brains. This list, leaving out certain hydrocephalic squaws and laborers, is: Cuvier, 64.5 ounces; Abercrombie, 63; Butler, 62; Spurzheim, 55.06; Diridelet, 53.6; Daniel Webster, 53.5.

The Western Reserve Medical College has recently received a gift of $125,000.

Surgical Suggestions.

Instruments are rendered aseptic in Professor Bergmann's clinic by boiling for five minutes before the operation in a one per cent. solution of carbonate of soda.

Catheters may be fastened in the urethra by tying a thread about them after introduction, painting a few coats of collodion over the knotted part with a thin layer of cotton between, and fastening both ends of the thread to the penis in the same manner.

Swedish Turnips have been found by Von Baracz best adapted to replace Senn's decalcified bone plates. They are hardened by being kept for four days in a one per cent. carbolic acid solution. Experiments showed them to be completely digested in fifteen days, and in one anastomotic operation they proved successful.—*Centralb. für Chir.*, June 11, 1892.

Unpigmented Scars are improved, Pashkis says, by tattooing with a skin-colored mixture made with sulphate of baryta, yellow ochre, and water.

Spinal Cord compression has been relieved in two cases by Urban, who made incisions on both sides of the spinous processes down to the transverse processes, uniting them at the upper end of the incisions, and then removing the spinal arches with the chisel close to their junction with the vertebral body.

Subpreputial Chancroids are treated by Dr. Cordier by washing with boric acid solution, then injecting one or two grammes of a saturated solution of chloride of zinc, and performing circumcision at once.

Urethral Fever is further guarded against by employing the Thiersch boro-salicylic solution for washing the prepuce, glans, and meatus, as well as for flushing the anterior and posterior urethra before any instrumentation.

Cinnamic Acid in the form of an emulsion, or in the following solution, for hypodermic use, is being tried by Lauderer and others as an anti-tubercular agent:

℞.	Cinnamic acid	1 part.
	Cocaine hydrochlorate	1 part.
	Alcohol	20 parts.

In lupus and surgical tuberculosis one or two drops at a point are injected into the patch or nodule, until about ten drops have penetrated the tissues. In forty-five cases of surgical tuberculosis, Lauderer secured 68 per cent. of cures and 15.5 per cent. of cases improved. The acid appears to cause resolution in the tubercular inflammation.

Abdominal Palpation alone, Guyon says, does not permit a diagnosis of tumor within the bladder, and anything thus felt is to be regarded as perivesicular. Rectal touch combined with pressure in the hypogastrium, when the bladder is completely empty, may teach much regarding not only the presence but the nature of a neoplasm.

Cancer of the Stomach has been thought to have its presence indicated, if in the diagnostic test no free hydrochloric was found in the stomach, and this method has been employed in the Massachusetts General Hospital, the New York Cancer Hospital, and other institutions, but with no very constantly positive results. Ewald (*Berl. klin. Woch.*, No. 26, 1892) has just shown that the absence of hydrochloric acid is not only noted in gastric carcinoma but also in chronic catarrh followed by atrophy of the mucous membrane, and in severe nervous depression. Old persons who have had much dyspepsia show atrophy of the lining membrane of the stomach, and there cancer may exist for a long time before it is suspected.

Buttons and Buttonholes, instead of stitches, for closing laparotomy incisions, so as to facilitate reopening at will, is a surgical suggestion of 1893 coming from Boston.

Borated Glycerine is considered by Dr. Bryson superior to any fatty substance as a lubricant for urethral instruments, being readily and thoroughly washed off, and showing by an opacity when it is no longer aseptic. Thus the dangers from urethral fever are lessened.

Symphysiotomy rendered antiseptic has become a comparatively safe operation, and offers an inviting substitute for craniotomy. Since 1886, Harris says, forty women have been thus delivered with only one death, and five children lost, and none of the patients being left permanently lame. The steps in the operation, which has not yet been done in America, will be found in the "Transactions" of the last meeting of the American Gynecological Society.

Cholecystotomy is not contra-indicated by the presence of intense cholæmia, as illustrated by one of the cases in Dr. Abbé's report (*New York Medical Journal*, No. 5, 1892). After removal of the gall bladder and duct, a drainage-tube was inserted into the hepatic duct, which would admit a finger. Over this was placed a second tube reaching from the junction of the ducts, so as to drain all the bile perfectly, the inner tube being removed after a few days, and the outer larger one being left to drain the sinus.

Immediate Closure of the Bladder in suprapubic cystotomy is possible in a large number of cases after removal of bladder tumors. Albaran reports two cases where complete reunion by first intention took place (*Ann. des Mal. des Org. Génit*, No. 12, 1891), and Tuffier reports in the same journal, No. 1, 1892, an instance where the same successful result was obtained in the absence of any drainage or use of catheter.

Catgut is regarded by Klemm as unsuitable for suture and inferior to silk, showing on culture after being used an infinitely greater number of germs.

Neuralgia at the base of the fourth toe may require excision of the head of the metatarsal bone, but protracted rest and the use of broad-soled shoes may obviate this necessity.

Hepatic Abscess under expectant treatment results in death in a large proportion of cases before bursting. Dr. Dabney (*American Journal of the Medical Sciences*, August, 1892) says free incision and drainage give far better results than any other mode of treatment. Aspiration is rarely satisfactory, and is not entirely free from danger.

A Novel Hat-rack Indeed.—The *Hospital Gazette* alleges, on the authority of a secular newspaper, that a certain physician in New York has in his study what is perhaps the most grewsome piece of furniture in the United States. He was presented with it by an Austrian medical student some twenty years ago while studying in Vienna, where he became an intimate friend of the young Austrian, who died shortly after the doctor returned to the United States, and left him the strange and startling article of furniture by will. It is the skeleton of a very large man, standing erect, with the right hand grasping a long spear. This is of oak, with a number of projecting pegs, and is used as a hat-rack. In the centre of the skull is set a clock, and the ribs form a cage in which this most humorous of physicians keeps his pet cockatoo, a splendid white bird, with a light yellow plume. It is rather close quarters for the cockatoo; but it is allowed a great deal of liberty, and when not caged in the skeleton sits on top of the skull. The doctor has taught it to say, "We're only mortal," and when these words are pronounced from the skeleton's interior, or even from the top of its skull, they are calculated to make the most volatile of the doctor's visitors do a little thinking. Many of his office patients have never seen it, as it can be screened off at a moment's notice by a baize curtain. Of course it's going to the World's Fair, and the proud owner will be there to exhibit it to an admiring concourse.

Therapeutic Hints.

Multiple Sarcomata are found by Sherwell (*American Journal of the Medical Sciences*, No. 4, 1892) to show great modification and amelioration under large doses of arsenic (at times as much as a grain a day of arsenious acid).

Chloroform is recommended by Werner in typhoid, after an experience covering one hundred and seventy cases. At first he gives a dessertspoonful of a one per cent solution every hour or two, day and night. In the period of decline only every two or three hours. It appears to diminish the diarrhœa and meteorism.

Ichthyol in fifty per cent. solution with lanoline is said to be the best single remedy in furunculosis.

Hepatic Colic as well as renal may subside under the sedative influence of a right hot bath.

Pseudo-Gall-stone Cases with nervous hepatic colic or genuine hepatic neuralgia, especially in young anæmic and neurasthenic patients, are often wrongly sent to Carlsbad where their condition is aggragrated, Fürbinger says.

Local Anæsthesia.—For minor operations the following, used as a spray, is recommended:

℞. Mentholi..... part i.
Chloroformi..... parts x.
Ætheris fort..... parts xv.
M. Ft. solut.

Scrofula as well as tuberculosis is benefited by creosote, which Sommerbrodt administers to children in milk or wine in daily dose not exceeding fifteen minims.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

ABSCESS DUE TO PERFORATING GASTRIC ULCER — CANCER AND PSOROSPERMS — SIR JOSEPH LISTER ON ANTISEPTICS AND ANTISEPTIC DRESSINGS—THE UNIVERSITY OF LONDON.

London, January 21, 1893.

At the last meeting of the Clinical Society a paper on "Abscess Due to Perforating Gastric Ulcer" was read by Drs. Penrose and Lee Dickinson. The paper was based upon ten cases observed by the authors in which perforation of the stomach had resulted in the formation of an abscess confined, within tolerably constant limits, to the upper part of the abdominal cavity. The physical signs might be those of pneumothorax but not in the position usual to that condition. Most of the cases gave hyperresonance on percussion, amphoric breathing, and the bell-note over an area more or less confined to the epigastrium and left hypochondrium. There was generally evidence of compression, either with or without pleural effusion, at the base of the left lung behind. The heart's apex was, as a rule, somewhat displaced. Sounds closely resembling those of pericardial or pleuritic friction were detected at times in some of the cases. The diagnosis of the cases was not usually difficult, but might be rendered so from the supervention of certain thoracic complications, such as empyema, pyo-pneumothorax, or pulmonary abscess. The authors had found the limits of the abscess cavity to be fairly constant, viz., above, the arch of the diaphragm; on the right, the falciform ligament of the liver; in front, the anterior abdominal wall; behind and below, the left lobe adherent to the anterior abdominal wall, and thus closing the abscess cavity at its anterior inferior angle; on the left, the cardiac end of the stomach, the spleen, and the diaphragm, there being a deep pocket of the abscess extending backward between these organs. The authors thought it was a question open to discussion as to how this deep pocket should be drained. They

were also in doubt whether it would be feasible to close the hole in the stomach wall at the same time that the operation for the relief of the abscess was undertaken.

Mr. Warrington Howard related two cases of perforating gastric ulcer. In these cases, he said, when by limiting peritonitis the cavity had become an abscess, how was it to be dealt with? One great danger was caused by bad drainage of the cavity, which formed pockets, especially at the back part. Possibly the best way was to drain such pockets through a counter-opening in the loins.

Mr. W. G. Spencer referred to a case in which it was supposed that a gastric abscess, due to perforation by an ulcer, had discharged itself into the cavity of the stomach, the patient recovering.

Dr. S. West did not think the localization of the abscess in one place was so frequent as the authors suggested. The abscess often travelled over the liver on the right side. If suppuration were suspected, it was not always easy to say it was in the abdomen. In one case it was thought to be in the pleura, as the symptoms were thoracic, but the patient died from perforation of the stomach. An abscess might occur without perforation.

Mr. Pearce Gould referred to two cases. He thought that such abscesses should be treated early and the opening made in the most dependent position. It might possibly be beneficial to turn the patient on the face, so that all the matter might easily drain away.

Dr. Lee Dickinson replied and said he was not aware of any case in which the abscess had been emptied through the stomach. In the ten cases collected the perforation was on the left, never on the right, of the stomach. Sudden peritonitis in an anæmic girl was almost certainly due to perforation of a gastric ulcer, and laparotomy should be done at once. Abscess, however, might occur in such a case without perforation of the stomach. In one case a cicatrix of the gastric wall was found when the abscess was opened.

At the Pathological Society Mr. J. Jackson Clarke made a further communication on the subject of cancer and psorosperms, and said that further experience had strengthened his conviction that psorosperms caused cancer. He had found, besides the capsule which appeared to be secreted by the host-cell, that the parasite, by a condensation of the outer layers of the ectosarc, sometimes possessed a proper capsule which, in some cases, had the form of two concentric layers joined by radial bars. He had succeeded in finding the radial arrangement of protoplasm described by some other observers. In a cancer of the bladder, secondary to one of the cervix uteri, he had observed that the sporing process took place in the centre of the new-formed epithelial tubes, and that the plasmodia and spores made their way between the epithelial cells into the supporting connective tissue, where they could be observed to have digested portions of fibres and cells. Spore formation did not always take place simultaneously throughout the ripe psorosperm; sometimes it began at the periphery or at the centre; in the latter case the spores might be mistaken for phagocytes. Mr. Clarke said he had found psorosperms in cystic breasts (cancerous and non-cancerous), duct papilloma of the breast, adenoma of the kidney, encapsuled adenoma of the thyroid gland, and adeno-chondroma of the testis. He had also examined round-celled, myeloid, and melanotic sarcomas, and found in them all absolutely overwhelming evidence of their being caused by psorosperms. Around the blood-vessels, which were actively budding, were numbers of free amœboid and intracellular parasites. The former clustered thickly around the new-growing shoots of the vessels. In the intravascular areas there were immense numbers of the parasites in the condensed, highly refracting stage, and the same process of reticulation and spore-formation which the author had described in cancers could be traced with the greatest ease in all the sarcomas examined. Mr. Clarke insisted on the ease with which these "ripe" psorosperms could be recognized by focusing a little above the section, when their high refracting power caused them to appear as bright globes comparable to Darier's "grains." More than two-thirds of the weight of a round-celled sarcoma of the testis was accounted for by the psorosperms present. The author also computed that at least one-third of the weight of every one of twenty different cancers was accounted for by the parasites they contained.

Mr. W. G. Spencer and Dr. James Galloway criticised Mr. Clarke's conclusions adversely. The latter observed that if it were assumed that the bodies described by Mr. Clarke were psorosperms, the stages at present recognized as characterizing the life-history of known forms were not traced in them. Mr. D'Arcy Power remarked that normal epithelium had not yet been examined with such high powers as were now used in these investigations, and that before this was done there was no criterion by which to judge of them. Dr. Sims Woodhead said he thought Mr. Clarke had gone too far in his deductions. Mr. Shattock said he had himself long held that cancer was a parasitic disease, and due to a protozoon; still, to establish the proof, Koch's postulates must be fulfilled. As Metschnikoff had suggested, possibly part of the cycle in the life-history of the alleged parasite was passed outside the body, and this might explain the exceptional success of inoculating carcinoma experimentally.

Mr. Clarke then replied and said that the bodies he had described were possibly not psorosperms in the strict sense.

The President (Sir George Humphry) said that the fact that Mr. Clarke had described these bodies in adenomata and cysts raised some difficulty in holding that they were the cause of malignant tumors. There were two questions to decide, viz., the nature of the bodies, and the relation they bore to cancer.

Mr. Clarke's specimens were referred to the Morbid Growths Committee for report.

In a post graduate lecture delivered a few days ago at King's College Hospital, Sir Joseph Lister explained at some length his present attitude with regard to antiseptics, and practice with regard to antiseptic dressings. Advancing knowledge, he said, had revealed that the blood serum was not a good soil for the development of disseminated and washed microbes, and that even when these had found an entrance into the tissues, if not in too concentrated a form, they were disposed of by phagocytosis. The surgeon might, therefore, now disregard microbes as they existed in the air. As to dressings, in the absence of antiseptics, dry rags kept the soil less favorable for the development of microbes than water-dressings. Iodoform had little antiseptic power outside the body, but had a remarkable antiseptic effect on the tissues; it was useful on the battle-field, but other means were preferable. The best arrangement was the employment of a chemical antiseptic which would securely prevent septic material from getting into the wound. Three conditions were necessary in such an agent—it must be antiseptic, it should adhere to the dressing so as not to be washed away between one dressing and another, and it must not be irritating. Sir Joseph Lister recommended a combination of gauze steeped in a solution of carbolic acid of 1 in 20 and subsequently dusted over uniformly with cyanide and zinc as fulfilling this condition most efficiently. The surgeon could himself prepare this dressing cheaply.

At the meeting of Convocation of the University of London, on Tuesday last, the new scheme presented by the Annual Committee was adopted with merely a verbal amendment. Dr. Collins was nominated for election to the Senate. Dr. Collins is a strong advocate for maintaining the present high standard of the degrees.

Medical Mayors.—Eleven towns in England have elected medical men to the mayoralty for the ensuing year.

CAN A WOMAN CATHETERIZE HER OWN UTERUS?

To the Editor of the Medical Record.

Sir: Your correspondent, Dr. J. L. Tracy, of Toledo, O., asks, in your issue of January 7th, if a girl can catheterize her own uterus. I have reason to believe that the method alluded to is a common one of producing abortion. More than once during the last year have I been called on account of dangerous hemorrhage, or threatened inflammation, where, on my arrival, I found that abortion had been produced, the woman claiming to have done it herself and with a catheter. In each case the catheter was shown me—the end soiled with dried bloody mucus. The woman usually states that "a neighbor showed her how." Unless the uterus be considerably displaced, a woman of ordinary intelligence and average length of finger can find her own os uteri as certainly as a surgeon can.

Respectfully,

L. B. Tuckerman, M.D.

Cleveland, O., January 27, 1893.

HEART-FAILURE AND DROWNING.

To the Editor of the Medical Record.

Sir: Having read an article in your editorial column of December 17th issue on "Aural Vertigo and Drowning," I feel impelled to add my quota on the subject.

It truly seems hardly feasible that cramp of the calf in a good swimmer should make him suddenly sink, and that without a struggle on his part or any outcry whatever. But cramp or contraction of the entire capillary arterial system, in connection with a weak heart, would, and does do it. When we consider the universal peripheral cold which is exerted on the arteries when a bather enters the water, causing them to contract, and thereby giving a weak heart an often insurmountable obstacle to overcome, no matter how strong physically the person may be, we can understand how heart-failure and death without a cry or any struggle whatever on the part of the victim may terminate the scene.

The idea I wish to accentuate in connection with the above is, that an individual with strong and well-developed skeletal muscles has not necessarily a strong heart, often quite the reverse, and that such a person upon entering the water, finding his heart begin to throb, should use every caution not to venture beyond his depth.

G. E. McLaughlin, M.D.

Jersey City, December 22, 1892.

BUTTER AS A FOOD.

To the Editor of the Medical Record.

Sir: Every physician should be interested in all articles of food, and should lend all the aid he can toward insuring wholesome food. No single article of diet is more important than butter, both to the well and the sick, and it is essential that the butter be good. A fact which has been brought to my notice as a physician, of late, is the difficulty of getting a good article of butter at a price within the means of poor people, or even those in moderate circumstances. This knowledge induces me to write upon the subject.

I do not believe that any city in the United States gives sufficient attention to the inspection of food. In Washington the appointment of food inspectors depends upon political influence. One inspector in this city is a negro lawyer. I suppose in all cities the appointments are political, without regard to the knowledge the person may have of the foods he has to inspect.

A large per cent. of our winter butter has been bought from the farmer during the summer at a low price, and so carelessly stored away that it generally has become rancid; this impurity being often supplemented by the addition of cheap fats. Forty cents per pound does not insure good butter in this city during the winter, and judging from the amount of bad butter sold, I do not believe any inspection is made of it.

The present Congress has before it a bill, the purpose of which is not to give the people good butter, but to prevent any substitute for butter being made—no matter how pure the substitute—while merchants are allowed to sell, with impunity, the most unwholesome articles of butter. I am convinced that I have seen cases of tyrotoxican poison due to butter.

There can be no doubt that an oleomargarine made under inspection, to insure only the use of fresh fats, is a safer article of food than most of the butter within the means of the poor people, and it seems to me worse than useless to stop the manufacture of oleomargarine, unless at the same time a law is enacted fixing a standard for butter and making it a crime to sell it below this standard. I am not defending oleomargarine, but merely mention it, as its existence shows to what straits people are put, in order to get an article that they can eat.

The farmer is not helped in the smallest degree by the high price put upon butter in the city; his summer butter bought at a low price gives the merchant a sufficient supply to enable him to dictate to the farmer the price of his butter in winter.

Philip S. Roy, M.D.

Washington, D. C.

RECTAL FEEDING.

To the Editor of the Medical Record.

Sir: Among the "News of the Week," in the Medical Record of December 24th, the Detroit Emergency Hospital Report is quoted as an authority for the suggestion of carrying on rectal feeding with a mixture consisting of 2 eggs, 20 grains of pepsin, 10 grains of chloride of sodium, and 6 ounces of water. The error herein involved is so very gross and evident that it would seem trite to point it out, if it were not for the possibility of some physiological neophyte being tempted into trying the experiment on the line suggested. From personal experience have I known practitioners of good standing recommend milk (not predigested) as a proper pabulum for a babe's rectum. Had the author of the above suggestion consulted his text-book of physiology he would have discovered the incontrovertible fact that the activity of all digestive ferments depends closely on the reaction of the medium. What is pepsin expected to do without its natural ally—the free hydrochloric acid? True, other acids may take the latter's place, but whence are they to appear in the rectum, the walls of which react distinctly alkaline? The result achieved by introducing the above-mentioned mixture into the bowel would be either the rejection of the unchanged pabulum, or, what is worse, in case of total intestinal inertia, changes brought on by the ever-present bacteria. In the latter case, the toxic effect of the ptomaïnes, be it ever so slight, would work irreparable injury to the already lowered vitality of the patient. The absorptive capability of the rectal epithelium has been proved experimentally; but why should we even attempt to burden it with tasks naturally relegated to other portions of the alimentary tract?

If we look with suspicion upon the predigested products brought daily before us by manufacturing chemists, we should give detailed instructions to the attendant how to artificially prepare, according to physiological laws, a food ready to be absorbed by the rectal epithelium. Surely there is nothing to be gained by defying the mandates of nature and science. Yours truly,

Edward C. Runge, M.D.

Physiological Department of Washington University, St Louis, Mo., January 9, 1893.

The Topsy of an "Uncle Tom's Cabin" troupe died recently and bequeathed her body to the doctors. Autopsy!—*Texas Siftings.*

THE "NEW DISPERSION ELECTRODE."

To the Editor of the Medical Record.

Sir: In your issue of January 14th, Edward Sanders, M.D, under the caption of "A New Dispersion Electrode for the Administration of Galvanism in Gynecology," describes, with slight variation, an electrode devised by the writer some four years ago. To my certain knowledge this electrode is listed in the catalogues of two prominent medical electrical instrument-makers, one of whom calls it "the Hayes's Abdominal Electrode." In the revised edition of "Elementary Principles of Electro-Therapeutics" (Haynes), published in 1890, there occurs the following account of my electrode:

"An abdominal electrode free from those objections has been devised by Dr. Plymmon S. Hayes. It consists of a disk of thin, soft metal, from which narrow sectors have been removed so as to allow of its being readily coapted to the surfaces of the various abdomens to which it may be applied. It is covered on the under side with a layer of spongiopiline about half an inch in thickness. A piece of chamois skin a little larger than the electrode is moistened and applied to the abdomen. The electrode, which has been thoroughly moistened, is now applied over the chamois-skin. This electrode fulfils the requirements of such an electrode, as it readily adapts itself to the surface of the abdomen and at the same time interposes an equal resistance in all parts to the passage of the electricity — the spongiopiline being of uniform thickness throughout its entire extent. This electrode is lighter than either of the other two varieties. If desired, a fresh piece of chamois-skin may be had for each patient. In point of cleanliness, lightness, and ease of manipulation, it is superior to either Apostoli's or Martin's electrodes, and is equally effective in allowing the current to pass through it without blistering or otherwise injuring the skin.

"The use of a salt solution, in order to increase the conductivity of the electrode, cannot be employed to any advantage with the abdominal electrode of clay, or with the Martin electrode. The effect of the salt upon the membrane of the latter is to harden it, and as the membrane is of unequal thickness and texture, there is unequal transudation through it, which precludes its use.

"In the electrode devised by Dr. Hayes, a salt solution can be used to moisten the electrode, provided any salt which may have been used at a former time has been thoroughly removed from the electrode and chamois-skin. This latter should not be wetted in salt solution. If the salt solution is not thoroughly removed from the electrode, the gradual evaporation of the water will cause the salt to crystallize, according to well-known physical laws, upon the edges of the spongiopiline. If the salt is not fully removed before it is used again, the conductivity of the electrode will be so much greater at these points where the salt has accumulated, as is manifested by the crystallization, that pain and blistering of the surface will result. If the battery is sufficiently strong to attain the desired strength of the current without the use of salt, the salt should never be used."

On comparing the above with Dr. Sanders's article, it will be seen that my device covers all of the essential points made by him in the description of his electrode, viz., a pliable backing of some soft metal, some form of felt, and chamois-skin. For the sake of cleanliness I have seen fit to have the chamois skin free from the electrode. I have also avoided having the back of the electrode covered with an insulator, for the reason that the union of the binding-post to the metal may be always in sight, and any defect at this point may be readily noted; also, because the metal of which the back is composed is soft, it is readily thrown into corrugations which should be smoothed out whenever they occur. When the metal is bare, these latter can be the more readily discovered and removed. In order to prevent wetting the clothing, it is my custom to cover the electrode with a folded towel, so that any water that might ooze from the edges of the electrode will be absorbed before coming in contact with the clothing of the patient. One point that should not be overlooked is that the smooth side of the chamois-skin should, in every instance be next to the patient's skin.

That this electrode offers more resistance to the passage of the current than the Apostoli electrode does, is easily demonstrated by the following experiment made on one of my patients, May 10, 1891. The internal application was accomplished by means of an insulated vaginal electrode. Apostoli's clay electrode was then applied and eight cells of my battery gave thirty-five milliampères of current. After a few minutes the ammeter indicated a current strength of thirty-eight milliampères. My electrode of the same diameter as the Apostoli electrode gave me but thirty milliampères.

I can endorse all that Dr. Sanders says in praise of the electrode. I do not doubt that Dr. Sanders's electrode was his own invention, but, in justice to myself, must claim priority of invention and publication. It seems strange that neither the doctor nor the firm who made the electrode should have failed to see the advertisement of the enterprising firm (The McIntosh Battery and Optical Co.) who have been manufacturing this electrode for nearly three years.

Plym. S. Hayes, M.D.

711 Venetian Building, Chicago, Ill., January 23, 1893.

ALSO CONCERNING THE SANDERS'S DISPERSION ELECTRODE.

To the Editor of the Medical Record.

Sir: Criticising my dispersion electrode, previously described in your journal, Dr. Longenecker, in the Record of February 4th, characterizes it as expensive, hard to make, not easily kept clean, and no better than sponge in taking up water. Instead of being what he says it is, the felt electrode is in every instance exactly the reverse. Its initial cost is small, and if sheet-lead be substituted for the block-tin seventy-five cents will cover the whole expense of material. Lead, I have found, will do almost as well as the tin, though not quite so durable. Besides the small initial cost, its readiness for immediate use, and its great durability—one now in use in dispensary practice having lasted almost two years—make it practically cheaper even, renewals of parts being very infrequent indeed. As regards cleanliness, in this regard it is absolute, it being almost impossible to wet or soil your patient with ordinary care, the chamois-skin—which, by the bye, must be of the oil tanned variety—and the rubber back completely protecting from all contamination by the felt.

The felt which I prefer is very cheap, being the kind ordinarily used to cover in steam-pipes, and it is surprising how much water a double thickness of such felt, properly quilted to the metal plate, will take up and hold. Dry, such an electrode is very light indeed, but when holding all the water it will, its weight is increased more than tenfold.

To get 250 to 300 milliampères through such an electrode, 6 by 8 inches, is a very easy matter; thus indicating the slight actual resistance it offers to the passage of the electric current.

Regarding its manufacture. Any one of ordinary ingenuity can make them, and after once made they will last for a year at least, even under frequent usage, with but little further attention. All mine, so far, have been home-made, and one such that I have, which has been used hundreds of times in dispensary practice, is still in use, and good for a number of years more, having required recovering but once in about two years. Hoping that you will find space for this reply to Dr. Longenecker in your valuable journal,

I am, most truly yours,

E. Sanders, M.D.

126 East Eighty-second Street.

MALARIA AND DRINKING-WATER.

To the Editor of the Medical Record.

Sir: In answer to the inquiry of E. D. S., in the Medical Record of January 28th, regarding the cases of "Intermittent Fever in Southwestern Africa" (as possibly due to drinking "land water"), I take great pleasure in informing him as to the results of my observations.

The shore party consisted of eight men. Six of these eight penetrated the coast for a considerable distance, and were supplied not only with ship's provisions but also with ship's water (distilled) in amount sufficient to last their entire stay. Five of the six of this party were "jackies," and each one admitted having drunk of the "land water" at different and frequent intervals. The sixth, a civilian, a Western man, was sent to obtain specimens of the animals inhabiting the west coast. He, being not only thoroughly posted (as were all the rest) but also thoroughly scared; very probably lived up to the instructions regarding "land water," received prior to his leaving the ship.

The other two of the party of eight lived at the Mission in St. Paul de Loando. They drank ship's water only, so far as I know. One, an officer, who did some travelling while ashore, not being out at night however, did suffer malarial poisoning, not of a pronounced type, but of obstinate endurance.

In my inquiries among the medical gentlemen at St. Paul regarding the susceptibility of previously infected people to the disease, no account of drinking water was considered, as nothing but "land water" was used in the town, with one exception. At the Café Royal, the chief bar, I found distilled water used not only for foreigners but residents as well. That "land water" is considered as a cause, and a prominently exciting cause, is evident (to naval medical officers) by the orders issued by medical officers of the different ships serving on the coast, prohibiting the use of native water for drinking purposes.

Very respectfully,
L. L. von Wedekind, M.D., U.S.N.

OBLIQUE ENTERORRHAPHY.

To the Editor of the Medical Record.

Sir: The oblique enterorrhaphy described by Dr. M. E. Connell in the Medical Record for January 28, 1893, is apparently not different from the method described by me several years ago, and for which credit has been given in Smith's "Operative Surgery," p. 502, 1887 edition.

Yours truly,
Robert T. Morris, M.D.

New York, February 6, 1893.

THE MEDICAL LAW IN ILLINOIS.

To the Editor of the Medical Record.

Sir: I wish to enlighten you a little upon the effect of the Medical Practice Act in Illinois. You say in your editorial of January 28th, "In those States in which the legal regulation of medical practice has been adopted, good results have followed." In Illinois we are overrun with itinerants, quacks, patent-medicine vendors, etc., and we cannot see that the Medical Practice Act has benefited us any. There are several persons practising medicine not far from here without State certificates.

There is one in this town now who buys patent medicines and dispenses them, evidently knowing nothing of the science of medicine. You published in the Medical Record, September 17, 1892, an account of an ordinance passed by our sister city, Effingham. This of itself shows that the State law is not effective.

Week after week patent-medicine vendors have been here with Indians, minstrel shows, etc. Some of the managers of these organizations established head-quarters, and received and prescribed for patients. When we remonstrated we were told they paid $100 for a license to vend their wares through the State.

There is a bill before our State Legislature now to abolish the State Board of Health, and there is a large sentiment throughout the State supporting the bill. In its work of establishing sanitary measures the Board has been a success; in regulating the practice of medicine it has been a failure. It has done injustice at times to reputable physicians, and has failed to benefit the people.

Illinois is one State where no good results have followed the legal regulation of medical practice, where the people have *not* been insured against quackery, and where the law has not benefited the people.

C. U. Collins, M.D.

Vandalia, Ill., February 1, 1893.

NASAL PUNCH-CUTTING FORCEPS.

By Charles E. Teets, M.D.,

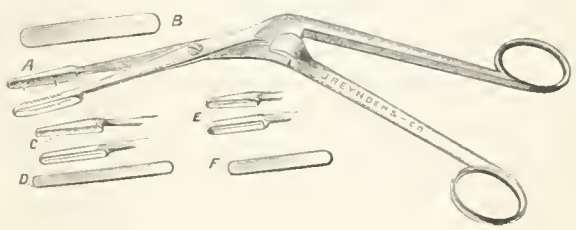
New York.

I offer a new instrument, which is an improvement on that made for me five years ago, as seen in cut *E*, where the punch-cutting portion is plain.

This new instrument, which I have named the Nasal Punch-Cutting Forceps, is shown in cut *A*.

This latter forceps has small teeth along the sides of the lower jaw, and two small pins or projections in the centre of the upper jaw. The object of this arrangement is to prevent the forceps from slipping in the act of removing the ridge from the septum, or a portion of the turbinated body. The teeth enter the lower, and the pins the upper, portion of the growth, holding the same firmly until entirely cut through.

This forceps, if properly made so that the upper jaw fits accurately into the lower, in skilful hands, will be found superior to any others of which I have any knowledge. I have found both the plain and those with the improvements extremely useful for removal of the adhesions of



external and internal walls, ridges of cartilages, hypertrophied turbinated bodies, and polyp pedicles. They were made for me by J. Reynders & Co., of New York. After testing them thoroughly I commend them, especially the latter, with the improvements, as being not only perfect in workmanship but also eminently practical and satisfactory in the results attained.

217 West Twenty-Third Street.

A SIMPLE TOURNIQUET CLASP.[1]

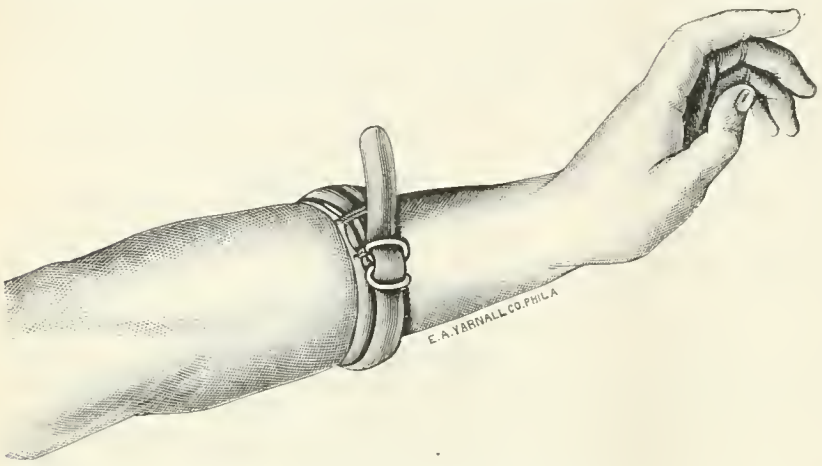
By H. Augustus Wilson, M.D.,

Clinical Professor of Orthopedic Surgery at the Jefferson Medical College, Philadelphia, Pa.

It must be evident to everyone who has occasion to use the elastic tourniquet and Esmarch's bandage, that the simplest form of all methods of fastening it, when applied, is either not known, not efficacious, or possesses other disadvantages. The method referred to is to pass the loop of rubber bandage underneath one of the last turns as it is applied, which by contraction holds the end in place. The rubber tourniquet, as sold by the shops in this country, is always provided with a chain of about six or eight inches in length, for the purpose of holding the end of the bandage and keeping it from slipping. The use of this chain necessitates the application of the entire length of the bandage, whether it is required or not. It was in

[1] Read before the Philadelphia Academy of Surgery, January 9, 1893.

order to dispense with this chain that I devised the simple form of clasp that is shown in the accompanying illustration. Messrs. E. A. Yarnall & Co., surgical instrument-makers in this city, have made the clasp, following my directions. It consists of a simple letter S, made out of one-eighth inch German silver wire, and is so simple in its construction that any one can twist a piece of wire into



the necessary shape, as I did with the original design. The manner of using the clasp is so clearly shown in the cut that a description is not at all necessary. Its advantages are—simplicity of construction and use; that the tourniquet may be clasped at any point; that while in use it cannot slip, and that the tourniquet may be unclasped with the greatest ease. It would appear that there was some necessity for a form of clasp of this nature in view of the extensive advertisements in English medical journals of a patented appliance of very much more elaborate construction and therefore quite expensive. Continued trials of this simple clasp, when used with ordinary elastic rubber tubing, have shown that it was all that was required for the purpose, and it is hereby given to the profession with the hope that it may tend to displace more cumbersome and unsatisfactory methods of accomplishing the same end.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 4, 1893.

	Cases.	Deaths.
Typhus fever	45	16
Typhoid fever	10	4
Scarlet fever	182	14
Cerebro-spinal meningitis	7	2
Measles	79	11
Diphtheria	112	41
Small-pox	3	2
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

The Offspring of Mulattoes.— Dr. W. A. Dixon comes to the conclusion, from observations extending over a period of more than thirty years, that the popular impression is correct, that the offspring of mulattoes are the subjects of constitutional disease to a greater degree than those of unmixed blood. When confined entirely to their own class, that is, without the admixture of pure negro or white blood, they scarcely ever reach the fourth generation in descent. Tuberculosis exists to an excessive degree among the descendants of mulattoes; they are inferior in vitality, intelligence, and morality, and show a high rate of mortality. Dr. Dixon has found it quite noticeable that mulatto girls develop younger than either white or negro girls, and that as women they fade much sooner. Also that after the second generation of pure mulatto breeding, practically all the children born are girls. The author remarks that it has always been proved in other races that human hybridity cannot be maintained without reversion or fresh supply from parental blood. He suggests the possibility of the danger that tendencies to tuberculosis and other strumous diseases may be increased in the United States by the large mixture of nationalities which is taking place in it, and points to the immunity of the Jews and other unmixed races from these affections. Whether the differences existing among our white population are sufficient to produce degenerate stock will probably not be determined for some time. But there seems to be no doubt that the weakness of mulattoes will prevent any large amount of mixture of the negro in the future American citizen.—*Boston Medical and Surgical Journal.*

Peculiar Symptoms of Poisoning by Santonin.—A correspondent of *The Lancet* narrates the following case: "I found my eldest son, aged nine, to be suffering from ascarides on the 9th of this month. In the evening I gave him an enema of quassia, which relieved the irritation until the 12th. As it returned I gave him, on the 13th, at 7.30, nearly five grains of santonin in milk. At 8.15 he had his breakfast of oatmeal porridge and would have gone to school, but I thought he would be better at home. About 9.15 I asked him to do something for me, to which he replied, 'Yes, father.' He did not do it, and after a minute I asked him if he did not hear me, to which he replied, 'No.' I noticed he looked pale, so went to him and carried him on to a couch. He was no sooner laid down than he turned a nasty, bluish-green color, the lips became blanched, limbs convulsed, teeth clenched, eyes wide open, pupils dilated, pulse absent at wrist, and he was bathed in a cold, clammy perspiration and unconscious. I forced open his teeth and gave him some brandy and water, and went off at once for my nearest colleague. In about ten minutes the twitchings became less and the pulse began to return at the wrist. When my colleague came he was improving, but remained unconscious until 10.30, when he spoke a few words and then fell into a sleep. He was not himself for the rest of the day, but now seems quite well."

Visitors to Switzerland.—Statistics have been compiled by the Swiss Government as to the nationalities of those registered in the hotels and boarding-houses of the country during the season of 1892, extending from May to October. The total number of foreigners was 77,950. Germany heads the list with 22,218; Great Britain comes next with 14,403; the United States and Canada third, with 9,641; France, 8,825; Austro-Hungary, 3,004; Belgium and Holland, 2,859; Italy, 2,815; Spain, Australia, Denmark, Asia, and Africa being represented each by less than 1,000.

Mucous Patch on the Conjunctiva.—Dr. J. S. Barnes, of Milwaukee, has observed a case in which the conjunctiva was the seat of a mucous patch. The lesion began upon the palpebral conjunctiva of the lower lid of the left eye and spread to the contiguous surface of the ocular conjunctiva Healing was progressing rapidly, under appropriate treatment, when the patient disappeared for three weeks. Upon his return the ulcer had entirely healed, with the formation of symblepharon between the ocular and palpebral conjunctivæ.

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THE LIMITATIONS OF THE VAGINAL SPECULUM.[1]

BY ELY VAN DE WARKER, M.D.,

FELLOW AMERICAN GYNECOLOGICAL SOCIETY; SURGEON TO THE CENTRAL NEW YORK HOSPITAL FOR WOMEN; SURGEON TO THE SYRACUSE WOMEN'S AND CHILDREN'S HOSPITAL; CONSULTING PHYSICIAN TO ST. ANN'S MATERNITY HOSPITAL.

I HAVE long contended that all the common and minor sexual ailments of women ought to be cared for and cured by their family medical attendant, who should understand his own limitations and know when to call in a specialist. If this were so we would hear less complaint about the evils of specialism, and which are mainly directed against the gynecologists. Anyone may demonstrate the truth of this by observing the condition of affairs in large villages and towns, where one or two bright general physicians and surgeons are doing a large part of the minor gynecology, and doing it well, but thereby are causing jealousy and enmity on the part of their local professional brothers. Now, I believe that what one can do, all may do in the matter of this every-day work of surgery. But practically this is not so. We are constantly seeing mistakes in diagnosis or methods made that reasonable care would have guarded against. It is a common history, repeated day by day, that a poor woman has started out with the simple complaint of a backache and a leucorrhœa. Her physician tells her that she has a "displacement," but he does not cure her; from another she learns that it is an anteversion; another tells her it is "ulcers;" one man calls it a laceration, and so on. Meanwhile the woman has grown older by months, or many years, and she has lost both her money and her faith in the knowledge and truth, and it may be in the purity, of man. I do not believe that a charge can be brought of this character against the general practice of any other special branch of surgery. But the fact is beyond dispute that, in the minor sexual disabilities of woman, she may spend years wandering from doctor to doctor, with some simple pelvic trouble, and no two men agree, and none cure her.

I offer a simple explanation of this state of affairs that accuses no man of ignorance, and holds all men up to honor. Woman offers a fatal facility for examination, so called. With an ordinary understanding of this special branch, it does not seem possible that it requires special training to examine parts that can be explored with such facility by both the fingers and the vision. And herein lies the difference. The untrained man must see, the expert had rather use the mother-sense—the touch.

A speculum is introduced into the vagina, and, with very rare exceptions, the instrument is either a cylindrical or a bivalve. It may be that the touch is not used at all, as it is the common opinion of most physicians, honestly obtained from the text-books, that a speculum is indispensable to a proper examination. If the touch is employed, it is a very simple and easy thing to do. Any man who is neither paralyzed nor a fool can feel the uterus; this is certainly true. Now, any educator will tell you that one attains perfection of physical and mental training just in proportion to the need of thoroughness, perseverance, application, and study to reach his standard of education and training. But in gynecology how is it? The physician introduces his speculum, and there is at once revealed to his gaze the seat of the error; or he introduces his finger or the sound, and he honestly believes he has given his patient as thorough an examination as is possible. He has not been obliged to practise his touch year after year in order to recognize the womb when he feels it. He may well pity the oculist, who is obliged to practise for years with a difficult instrument like the ophthalmoscope, in order to intelligently examine the eye; or to spend years of patient work with the stethoscope, that he may become proficient in the exploration of the chest; or to work patiently in studying electrical reactions—mastering one difficult science in order to get the key to another—like the neurologist.

I do not believe that any gynecologist doing full work to-day will dispute my definition when I say that gynecology, as at present existing, is the science of Touch. Touch brought to a perfection of training, acuteness, delicacy, and certainty never before reached in any field of surgery. Such a faculty is born with no man; it may be more teachable in one than another, just as one man's mind is more receptive than another's—that is all. I believe that some proportion of this trained touch should be the property of every physician, but, judging from my own experience in gynecology, this is not true. The errors that I have seen made in pelvic diagnoses could not have been made with a tactile faculty even a little trained. In my bedside interviews with physicians, whose professional culture and experience would secure them excellent standing anywhere, I have generally noticed one defect in their method of pelvic exploration that to me explains the whole matter. The physician makes his diagnosis through his speculum, making the digitation of the parts very briefly and superficially. He simply subordinates his touch to his vision, falsely believing that he is thereby enabled to see more than he can feel.

Consider for a moment how small a surface is exposed to you through the field of the instrument, and how little it signifies. It is the surface of the part simply, and means no more there than an equal extent of surface elsewhere, while behind and beneath lie the organs about which the ever alert moral and physical nature of woman vibrates, and concerning their condition the speculum gives not the slightest hint. It would be just as reasonable to expect a knowledge of the aortic valves by examining through a speculum the skin of the chest.

But there is one reason for the misuse of the speculum that the physician is not responsible for. It is this: Can you name me a text-book in which the student is given the advice not to use his speculum as an instrument of diagnosis of a pelvic condition? That the story it tells is limited to the part it renders visible? I will say nothing about the need of an educated eye to appreciate even this much, because it does not diminish the force of my argument to assume that the physician has acquired this by training and practice. There are instruments which render inner parts that are beyond the reach of touch accessible to vision, like the ophthalmoscope or laryngoscope, in which this sense is a dominant faculty; but the vaginal speculum holds no parity of relation to these instruments, either in the pathological importance of the part displayed, or in the condition rendered visible. Take, for instance, a perineal retractor held by a trained nurse, and it displays to you an epithelioma of the cervix. What knowledge have you gained that will be of use to

[1] Read before the Syracuse Medical Society.

you when you come to operate, or upon which to base an opinion for the benefit of the patient, compared to that which even an ordinary touch will furnish? Some forms of the speculum, like the valvular and the cylindrical, are actually instruments of deception. I have known men to detect an extensive laceration properly by the touch, and then doubt the evidence of their own fingers, because they could not verify the condition through a bivalve speculum. The condition known as ectropion of an injured vaginal portion, with extensive cicatricial deposit between the everted flaps, is one that no speculum would reveal, although clearly evident to the ordinary touch. I might enumerate many other conditions of the cervix, if it were necessary, that the speculum would serve to mask, rather than render evident.

An abject reliance upon the speculum is capable of working greater harm than to confuse one's senses, or to obscure a condition. Many women come to us with back- and side-aches, nervous, anæmic, and in a depressed mental condition. The speculum would reveal a possible plug of mucus in the os, or erosion of its margins. Now, if you were to treat the local as an explanation of the general condition, as is so frequently done, you would possibly be making the deplorable mistake of treating a result rather than the cause. It would be possible to do the patient far greater harm than to delay her cure, namely, to render her morbid upon the matter of her pelvic organs. In the extensive field of woman's ills, I know of no complaint so difficult to treat as that of "womb upon the brain." I believe the injudicious and routine use of the speculum, or, in other words, "local treatments," as they are called, is largely concerned in creating this morbid mental condition. Back of this lies the fatal facility of speculum introduction, and the widely spread error concerning the vast importance of the minor uterine disorders in causing the chronic ill health of women.

From the stand-point of the surgical gynecologist it is difficult to understand how the valvular or cylindrical speculum can be any aid to a diagnosis, and why the use of these instruments is so strenuously insisted on by the general practitioner. Even when used to expose the vaginal portion for treatment, their utility is very limited. In many positions of the uterus it requires great tact to bring the parts into view, and when the cervix or vagina is the seat of any serious disease, it is certain to cause more or less pain. The misery inflicted upon women by these instruments is an unwritten chapter in human suffering and heroism, and will be placed to the credit of afflicted women by the recording angel.

Now, in all matters that the vaginal speculum can tell you nothing about, the touch, single or combined, can give all necessary information. Let me enumerate the more common and important: The size of the uterus and the sensibility and density of the uterine body; versions and flexions and prolapses of the organ; the presence of pelvic new-growths; the mobility of the uterus; the presence of inflammatory exudates; collections in the tubes; ovarian displacements and conditions; the condition of the bladder and of the rectum; solid and fluid pelvic accumulations; areas of altered sensations, and simulated and hysterical pelvic conditions; the differentiation of the uterus from pelvic new-growths. Here is a very brief group of conditions that a speculum in the hands of the most expert could throw not a single ray of light upon, but, on the contrary, if allowed a place in the pelvic examination, would divert the mind from the true channels of investigation. Many of the tardy recognitions of cancer of the cervix come from the attempt of the physician to gain an understanding of the condition of the cervix through the speculum instead of by the touch. Here is a condition where an error could not occur once in a hundred times when investigated by the touch, and where the speculum would assist the truth in but one case in a hundred.

The object of this paper is to help every man on the true road. And my first advice is never to use a valvular or cylindrical speculum at your first formal examination; make it convenient to leave it at home, and then you will find it more easy to break up a bad habit in case you have already formed one. Depend on your touch alone; if you find it difficult to gain a clear idea of what is before you, that is the best reason to persevere. Go at the work in a realizing frame of mind that you are going to educate your touch and become somewhat of a gynecologist, and that what you have undertaken to do is one of the most difficult things in the wide domain of surgery. If it were easy, and I am sorry to say that is the prevailing opinion, it would require neither skill nor knowledge. As each case presents itself, practise your touch and nothing else in its study. Do not be tempted to use a sound. I know of gynecologists of great renown and practice who have not possessed a sound in years. These men are surgical heroes, and yet they would hesitate to incur the risk of its employment under the conditions of its daily use in the office practice of physicians. The sound, at the best, is only an indirect way of feeling, and blunts instead of refines the touch.

As case after case comes to you, and months pass into years, you will find that by the education of a sense that transcends sight, hearing, taste, and smell—in fact the highest endowment of your body, the mother-sense—you have created a new channel of knowledge and found a new field to explore. Having once begun this study, the day will never come when you cease to cultivate and refine this master-sense. This training is within the reach of all of us, in more or less of its perfection. If instruments are to be of service to us, we must become masters of their purpose and range of usefulness. Abandon the speculum and sound as instruments of ordinary diagnosis. They can tell you but little that your touch will not tell you better and more safely. You will never find out by your eyes what you are unable to learn by your touch.

There is no doubt that the expert is able to palpate with reasonable certainty the ovaries in their normal position, in a suitable subject, but in order to do this I believe that it requires long and faithful practice; but the difficulty is to get the all-round practitioner to believe this. You must be your own critic, and your inner sense of truth must be your monitor. When you are able to say, not to a colleague or a client, but to your secret self, "These were surely ovaries I touched to day, and I know them from having touched like organs in other women many times before," you will be in a position to understand what a difficult thing a pelvic examination is, and that gynecology is truly the science of touch.

Thoughts for Antivivisectors.—The man who says he would rather endure suffering or death than profit by knowledge gained by experiment upon animals is either a Buddhist or a hypocrite. He must neither have eaten a mutton chop nor ox flesh; he must decline the services of geldings; he must make war upon the spaying of sows (an exquisitely painful operation), upon the castration of bulls, horses, and boars; he must forswear capons; must prosecute the midnight trapper of rabbits; must abjure all forms of "sport;" grouse, partridge, and pheasant shooting, salmon and trout fishing, must be to him *anathema;* pigeon shooting he must visit with heavy punishment. These are all forms of habitual and daily infliction of agonizing, enduring, and mortal pain upon highly organized and sentient creatures for the purposes of pleasing the palate, suiting the convenience, or increasing the money gains of those who practise and those who permit and profit by them.—*Ernest Hart.*

Rags and Woollen Goods.—The woollen manufacturers of England are complaining bitterly of the government prohibition of the importation of rags as a precaution against cholera, and have been obliged in many instances to cease the manufacture of shoddy goods in consequence of this prohibition.

REMARKS ON OTOSCLERONECTOMY AND OTONECRONECTOMY.

By SAMUEL SEXTON, M.D.,
NEW YORK.

To the editor of the *Medical News* are we indebted for the newly coined words above written, which seem well adapted to the operations on the tympanum they are intended to name. Otoscleronectomy is "designed to express the surgical removal of part or all of the sclerosed and anchylosed conductors of sound in chronic catarrhal otitis media," and otonecronectomy, "the excision and removal of the necrotic conductors of sound in chronic purulent otitis media."

I have myself performed a large number of these operations for the cure or relief of deafness, tinnitus, vertigo, headache, otorrhœa, etc., during the past seven or eight years, and, therefore, offer some remarks, for the benefit of those whose experience has been more limited, on certain points the importance of which more recent experience has made manifest.[1] The pioneering period of this work, happily, having been pretty well completed by workers abroad as well as in our own country, it now remains to improve the ground that has been reclaimed at the cost of so much labor.

I am constantly in receipt of inquiries on various points from those contemplating or engaged in intra-tympanal surgery, and I shall endeavor to answer some of these to the best of my ability. I will begin by replying to the query, "Can these operations be done without narcosis, if cocaine be employed locally?"

Otoscleronectomy and Similar Operations Cannot be Successfully Performed Under Local Anæsthesia Alone.—It is true that insensitive persons will endure cruel manipulations in the middle ear which would be unbearable ordinarily. I myself have been, in a few instances, overpersuaded by patients to attempt these painful procedures, but have always found that the work under such circumstances could not be satisfactorily done. Moreover, it must be kept in mind that even where the utmost caution is exercised, cocaine is liable to cause alarming collapse when applied to the mucous membrane of the ear.

The Importance of Personal Hygiene.—Not a few patients submit unwillingly to the hygienic restrictions before and after these operations, especially as to diet, the advantages of which have been found by experience to be necessary for so many. As to diet, the best is practically one in which vegetables form the principal part, though, in some instances, fish, eggs, milk, the white meat of boiled fowl, and the like are admissible. This regimen should commence, if possible, some weeks previous to the operation, and be continued afterward, say from four to eight weeks, or until the tendency to regeneration of the drumhead has ceased. Of course, other hygienic measures as regards clothing, exercise, etc., should not be overlooked. It is in respect to these matters that infirmary patients are neglectful, and the results obtained often unsatisfactory. The writer is quite sure that painstaking efforts alone, in respect to the details of an operation, never would have enabled him to achieve the success he has had without the intelligent co-operation of patients in private practice. An operation should not be undertaken without this assistance on the patient's part, since on its observance may depend the prevention of regeneration, to which there is a tendency, more or less pronounced, in the free edges of the drumhead remaining after its excision.

Regeneration of the drumhead nullifies to a great extent, often wholly, the good results of scleronectomy so far as hearing is concerned, inasmuch as the reproduced membrane again hermetically closes up the channel for the entrance of sound into the ear.

[1] For a full description of these operations, together with illustrative cases from my own practice, *vide* The Ear and its Diseases, p. 461, William Wood & Co., New York, 1888; and Deafness and Discharge from the Ear, p. 89, J. H. Vail & Co., New York, 1892.

The key to the labyrinth in necronectomy lies in the drumhead. In my early experience in intra-tympanal surgery it was my belief that liberation of a rigid stapes was the main object in view; and indeed, the results then obtained from liberating the stapes from the incus were most gratifying for a short period of time, but the moment the opening in the drumhead, which had been previously made, healed up, deafness was as great as ever.

It would, indeed, be most desirable to relieve deafness and other aural symptoms by so simple a procedure as mobilizing or excising the whole or part of the stapes, or the incus and stapes, procedures that have been undertaken abroad, and of late much exploited in this country; but the numerous experiments made in this direction have not met with the success hoped for. I have myself, in a number of instances, removed the stapes along with the other ossicles, where from its position *in situ* it was exposed to disturbance in wiping out the fundus, but in such cases the results were similar to others where the stapes was allowed to remain.

The indications, as in other surgical operations, are sometimes difficult, but from a careful consideration of the symptoms, guided by personal experience, a prognosis can be made, with but few exceptions, which will be referred to further on. But the result in any given case cannot be foretold from statistics of other cases alone, since it is impracticable for this purpose to group together a sufficient number of operations where the same conditions as to age, stage of the disease, constitution of the patient, vertigo, tinnitus, headache, and other symptoms are present. Hence each individual case must be considered by itself in respect to prognosis. No one for a moment supposes that any surgical operation is uniformly successful; with given indications the surgeon strives to obtain the best results, but unforeseen circumstances may arise which will interfere. Were surgeons to refuse their aid because of possible failure, the science of surgery would come to a standstill.

The most difficult cases to diagnose are those described as progressive sclerosing catarrh, where the middle ear is deeply affected with seeming invasion of the inner ear. I say "seeming," because this condition is not always demonstrable, and the tuning-fork is not a sure guide. In great deafness from this cause I have experienced a few failures, though not in all such cases; in some of them there has been improvement, in others the *status quo* has been maintained, while in two or three there has been reactive inflammation of the mucous membrane lining the tympanum, with or without plastic exudation, and calling to mind the sudden changes in the ear occurring in persons much run down and suffering from constitutional disease. In these cases, with a high grade of deafness, where I have operated without a good result, the patients have considered that they were getting more deaf, and that a failure would finally leave them no worse off than before.

There are many very deaf persons like the foregoing, at or beyond middle life, whose neuropathic condition, unfortunately, makes them exceedingly obnoxious to otoscleronectomy. A searching examination sometimes fails in eliciting the necessary facts on which to make a diagnosis in these cases. If they are unaccustomed to self-restraint the hygienic requirements, specially as to diet, are liable to be disregarded. The expectations of those who labor under the great disadvantages of extreme deafness and other severe symptoms are often far beyond what can be promised; they fail to remember the extent of relief promised before the operation, and expect results hoped for by themselves rather than what the surgeon predicted. The prognosis, therefore, should be guarded.

Accurate hearing-tests made beforehand may often obviate the disappointment sometimes experienced by these patients; thus, when one ear is very defective and the voice is raised in making a test of it, the sound heard in the other ear, though closed by pressure of the finger, may seem to be heard in both ears. Such a test is often misleading. Indeed, the patient may hear as well with both

ears closed by the finger as without such closure, sound passing through the skull. I have seen Professor Graham Bell converse with his mother, who is profoundly deaf, by placing his lips to one of her eyes, of course closed.

It is a good plan, in testing a case of greater deafness in one ear, to plug up the better one with a pellet of cotton-wool firmly pressed upon with a finger, and then make the voice test of the former through a conversation tube, thus confining the sound to the organ examined, and excluding it from the other.

Where deafness exists in both ears an operation on one of them is generally attended by much improvement in the other.

The Benefits of the Operation are Permanent.—Patients have remained under observation after these operations for years without any notable change taking place. The good results of an operation in chronic catarrh, as has been stated, may be impaired by neglect of hygienic rules prescribed. An unfortunate complication has occurred in several of my cases in consequence of misguided treatment of the case after it had passed from under my own observation. Thus, on account of head colds from exposure, accompanied by congestion of the mucous membrane of the middle ear; or on the appearance of a furuncle in the external auditory canal, which sometimes occurs from the slight irritation of secretions, etc., and gives rise to swelling of the parts and pain, the case may seem to require treatment. These troubles, which yield to rest and mild measures, may, from active and meddlesome treatment, be protracted and greatly alarm the patient. I never have witnessed any serious inflammatory reaction in a case remaining under my own observation, nor have I known a dangerous symptom to arise as a result of the operation, except from meddlesome treatment, as above stated.

Soon after scleronectomy the drum-cavity becomes dry and non-secreting, but where a strong tendency to catarrhal congestion of the mucus-lined cavities of the head prevails, secretion of the middle-ear tract may take place its duration depending on the patient's general health rather than on local conditions. Under proper hygienic regulations, and gentle cleansing, secretion subsides and suppurative action may be avoided, or if established, which is seldom, will soon subside.

Protection of the ear after an operation, for any length of time, is scarcely ever required, though in sensitive persons the need of it may be felt; such persons nearly always protect the ear, especially when exposed to storms, bathing in the surf, etc.

The operation of otonecronectomy is always followed by good results, and I have nothing to add to what has been already said on that subject.

Smelling-bottle for Cold in the Head.—Dr. Tucker Wise has found the following highly satisfactory: Fill a wide-mouthed ounce bottle with coarsely pounded carbonate of ammonia, and add eucalyptia, ʒ ss., dissolved in spirits of chloroform (double strength), ʒ jss. This bottle should be applied to the nose as ordinary smelling-salts every half-hour, and the pocket-handkerchief be used gently when absolutely required, not violently trumpeting the nasal organ on every occasion that the passage becomes blocked. With the addition to this simple treatment a hot foot-bath may be taken, and steam inhalation at night.

Goose with Stramonium Stuffing.—The *British Medical Journal* reports that the proprietor of a temperance hotel, who suffered from asthma, for relief used to smoke a mixture of stramonium and belladonna, which was kept in a jar in the pantry. Recently the cook, who was preparing a goose for dinner, by mistake went to the jar and took out a large handful of the mixture and stuffed the goose with it, believing it to be sage. All who ate of it had the characteristic symptoms of stramonium poisoning—burning and dryness in the throat, dilatation of the pupils, etc. They were relieved by emetics.

A MEMORIAL ADDRESS ON THE LATE DR. JAMES R. LEAMING.[1]

By J. LEONARD CORNING, M.D.,

NEW YORK.

Mr. President and Fellows of the Academy: It is seldom that the profession is called upon to endure so great a loss as that which it has so recently sustained in the death of Dr. James R. Leaming, of New York. For nearly half a century Dr. Leaming had practised medicine with success. What a panegyric is contained in that brief statement! Among all the liberal professions there is, I am convinced, not another which, while exacting the most definite knowledge of special subjects, makes such stringent demands on the whole man.

To be thorough in one's professional acquisitions, and to prove it in consultation at the bedside; to advance the interests of the profession both in its scientific and corporate capacities; and to observe the laws imposed by the most delicate sense of professional propriety and good taste are things which are in accord with the best traditions. Such attributes, undoubtedly, carry with them the prerogative of fame, which though acknowledged, or largely acknowledged, by the scientific minority, is still fame. There is, however, a form of distinction found likewise among physicians, which, while including much of the above, has also added to itself a wide sympathy with human affairs—an extra-professional sympathy, if one may so express it—bringing the possessor of the talisman as a votive offering the respect and regard of all conditions of men, quite irrespective of the accidents of occupation or social station. It is this latter phase of distinction which belongs in a pre-eminent degree to Dr. Leaming.

In his affectionate intercourse with his children, in his cordial regard for the interests of the profession, in his solicitude for the welfare of his clients, in his social relations, and in the complete discharge of all public obligations he displayed a versatility of thought and feeling that was indeed remarkable. In this welding together of heart and mind, we find the explanation of his love for art, on the one hand, and his equally enthusiastic devotion to philosophy, on the other.

Such a character demands more than a passing scrutiny; and if, with a view to greater chronological accuracy, I now proceed somewhat more in detail with the recital, it is because I am confident that by so doing I shall gain the cordial and sympathetic approval of the distinguished audience here assembled.

The name of Leaming, or Lemming, is of very ancient English date, and records concerning it are found in county annals, gazetteers, and old manuscripts. Probably the first instance of the name is found in an old Welsh poem, reciting the deeds of prowess of an Anglican prince in a battle which occurred A.D. 547.

From the twelfth till the last century a number of families bearing the name of Leaming were residents of York, Essex, and Lancashire. What is of more immediate interest is the fact that Christopher Leaming, from whom is descended the subject of this biography, landed at Boston about the middle of the seventeenth century. He remained, however, only a short time in Massachusetts, but removed to Long Island, where he married.

Dr. James Rosebrugh Leaming, one of the direct descendants of Christopher, was born at Groveland, Livingston, County, February 25, 1820. His early education was obtained in the district schools of the neighborhood and later he was sent to Temple Hill Academy at Geneseo.

Having early evinced some taste for scientific pursuits, his father decided to allow him to study medicine. Accordingly, he served, as was then the custom, an apprenticeship in the office of two physicians—Drs. Edward and Walter E. Lauderdale, of Geneseo. This was in 1845. In 1847 he matriculated at the University of New York.

[1] Read before the New York Academy of Medicine, February 2, 1893, by appointment of the President.

graduating from that institution in 1849. Immediately thereafter he established himself in New York, his first office being located in Waverley Place. Soon after this, he became associated in hospital work with Doctor George P. Cammann, who in his day was a recognized authority on chest affections. This association with Cammann was the means of directing Dr. Leaming's attention to affections of the heart and lungs, a bent which he followed with untiring diligence for many years, and which was rife in him almost till the hour of his death.

Dr. Leaming has held during his long career many important positions in hospitals and other medical institutions. He has also expounded, both orally and by the pen, that branch of medicine to which so much of his energy was given. The servile tendencies of certain phases of pedagogy were, however, foreign to his whole mental make-up. In his writings, in his lectures, in his conversation he seemed constantly bent on suggesting new channels through which thought might flow to more perfect sequences. And how beautifully flavored with quaint humor and kindly facetiousness was his discourse on matters commonly regarded as prosaic! Only those who have heard him on such occasions can adequately appreciate the deftness with which he was able to ward off the soporific influence of an abstruse argument by a timely anecdote. Even his more elaborate writings evince in a striking manner this ability to clarify nebulous propositions by apt similes and timely illustrations.

Among his more important papers may be mentioned the following: "The Use of Muriate of Ammonia in Sun-stroke," *New York Journal of Medicine;* "Thuja Occidentalis in Malignant Disease," *New York Journal of Medicine;* "Therapeutics of Chloride of Ammonium," "New York State Medical and Surgical Transactions;" "Cardiac Murmurs," *New York Medical Journal*, 1868; "Discussion on Pneumonia," "Bulletin of New York Academy of Medicine, 1865;" "Pleuritis," "Bulletin of New York Academy of Medicine, 1870;" "Respiratory Murmurs," *New York Medical Journal*, 1872; "Plastic Exudation within the Pleura," "Dr. Brown-Séquard's Archives, 1873;" "Hæmoptysis," MEDICAL RECORD, 1874; "Significance of Disturbed Action and Functional Murmurs of the Heart," "Transactions of the New York Academy of Medicine," and D. Appleton & Co., 1875; "Physical Signs of Interpleural Pathology," read before New York Journal Association, 1877; "A New Classification of Phthisis Pulmonalis," "Archives of Medicine, June, 1879;" "Diagnostic Areas Over the Human Chest," *New York Medical Journal*, April, 1887; "Contributions to the Study of the Heart and Lungs," E. B. Treat & Co., 1887; "Acoustics Applied to the Human Chest in Physical Diagnosis," *New York Medical Journal*, January 26, 1889; "Endemic Pleuro-Pneumonia," *Medical Gazette*, 1880; "Is Consumption Communicable?" *New York Medical Journal*, 1883; "Interpleural Pathological Products, their Causes, Significance, and Specific Relationship to Pulmonary Phthisis," MEDICAL RECORD, 1888; "The Philosophy of Climatic Treatment of Chest Diseases," "Journal American Climatic Association, 1887."

Besides these strictly scientific papers, he also delivered a number of public addresses, among which the "Memoir on Dr. George P. Cammann," read before this Academy, and an "Annual Address before the Alumni Association of the Medical Department of the University of the City of New York," are specially noteworthy.

Dr. Leaming was a member of many learned societies. He was one of the older members of the New York Academy of Medicine, of which he was also Vice-President. He was also for many years an active member of the Alumni Association of the Medical Department of the University of the City of New York, as well as President of that organization. At the time of his death he was also a member of the Pathological Society; of the County Medical Society; of the Physicians' Mutual Aid Society, and Consulting Physician to St. Luke's Hospital.

Besides the above papers pertaining to the special field in which he labored, Dr. Leaming lectured in a number of medical institutions, and notably in the New York Polyclinic, of which he was President and Emeritus Professor of Medicine.

Leaming will always be regarded as one of the cleverest diagnosticians of heart and lungs; and the profession will also remember him as the advocate of large doses of calomel in the treatment of pneumonia, and smaller doses in the treatment of pleurisy. So confident was he of his own ability to ferret out the more occult features of cases that, shortly before his death, he expressed, as Dr. Frank W. Jackson informs me, great regret that he was unable to apply his ear to his own chest.

Leaming was a man who had the courage of his convictions. This was impressively exhibited during an attack of pneumonia, from which he suffered several years ago, when on two successive days he took a drachm of calomel at a dose. Beyond all doubt Dr. Leaming's greatest services to the profession were his teachings in regard to pleural pathology and the interpleural origin of râles.

When Dr. Leaming began to teach the interpleural origin of râles he was confronted by a storm of opposition, which would have dismayed a man less sincere in his convictions. Thus a prominent diagnostician, since deceased, declared at the time that it was impossible that râles could be produced in the pleura. Persevering in his advocacy of this theory, however, he lived to see his propositions meet with widespread acceptancy in the profession.

While it is probable that few diagnosticians will be willing to accept his dictum that all râles have their origin in the pleura; it is, as previously said, generally admitted that they may, and often do, thus originate.

In his paper on "The Significance of the Crepitant Râle," Dr. Frank W. Jackson observes:

"He (Leaming) bases his argument for the pleuritic origin of râles in pneumonia, apart from theoretical considerations, upon the fact of the presence of fibrin on the pleura in these cases, and the very significant fact that râles were heard shortly before death, when, on autopsy, the lung was found solid from pneumonic consolidation. Here it is obvious that no air could enter the air-vesicles to disturb them or to produce bubbles in a viscid fluid." His researches regarding pleuro-pneumonia in cattle also served to yield confirmatory evidence.

By common consent Dr. Leaming was credited with an ear which, in its acuteness, was almost without a rival.

In the above array of statistics we have a brief summary of the scientific work accomplished by Dr. Leaming in his long professional career; but how inadequate is this exposition as an index to that fulness of living, that breadth of sympathy in the great and little things of this life, which was so characteristic of him. If it be difficult to give even a partial idea of the intellectual attainments of such a man, how much less competent shall we be to give an inventory of that rich soul-life which constantly prompted him to deeds of kindness and heroic effort in behalf of his suffering fellow-men.

Among all his characteristics I think his love for the beautiful, his devotion to the fruits of the imagination, whether expressed in color or in marble, in landscape or in music, was most lovely. I remember finding him one day, as the drama of life was drawing to a close, sitting in a large easy-chair surrounded by the works of Bacon, Huxley, and Spencer, by the poetry of Chaucer, Shakespeare, and Byron, while from the walls of his study the faces of old cavaliers gazed upon the scene, with looks suggestive of the tournament or the battle-field. I remember, too, we were discussing that beautiful poem of Byron's, from the "Hebrew Melodies," beginning:

> When coldness wraps this suffering clay,
> Ah, whither strays the immortal mind?
> It cannot die, it cannot stay,
> But leaves its darken'd dust behind.

Then, unembodied, doth it trace
By steps each planet's heavenly way?
Or fill at once the realms of space,
A thing of eyes that all survey?

Eternal, boundless, undecay'd,
A thought unseen, but seeing all,
All, all in earth, or skies display'd,
Shall it survey, shall it recall;
Each fainter trace that memory holds
So darkly of departed years,
In one broad glance the soul beholds,
And all that was, at once appears.

Before Creation peopled earth,
Its eyes shall roll through chaos back;
And where the farthest heaven had birth,
The spirit trace its rising track.
And where the future mars or makes,
Its glance dilate o'er all to be,
While sun is quench'd or system breaks,
Fix'd in its own eternity.

Above or Love, Hope, Hate, or Fear,
It lives all passionless and pure;
An age shall fleet like earthly year;
Its years as moments shall endure.
Away, away, without a wing,
O'er all, through all, its thoughts shall fly;
A nameless and eternal thing,
Forgetting what it was to die.

As he finished reading the last line the door-bell rang, and presently there was ushered into his presence a young man, evidently in the last stages of phthisis. He wore that wistful, forlorn expression peculiar to persons in his condition, and as Dr. Leaming finished the examination, the patient looked at him with an expression in which apprehension and hope formed a sad incongruity. His condition was so clearly hopeless that I inwardly trembled at the thought of what effect a sudden announcement of his true condition might have upon him. Instead of giving him a direct answer, Dr. Leaming rose, and without the slightest trace of embarrassment and a benevolent look, conducted him about his consulting-room, and thence into his drawing-room, exhibiting with an air of enthusiasm and in the most charming anecdotal manner, the pictures which he had been so long in collecting, and which were so much to him. The effect upon the patient was magical, his face at once assumed a more cheerful aspect, and when the consultation was finally at an end, and Dr. Leaming reconducted him to his study, nothing but the hopeful expression sometimes seen in persons suffering from this fatal affection was visible. This is but one of the many instances in which this soulful man was able by his masterful sympathy and tact to remove the sting of a relentless fate.

But considerate though he was of the interests of those who were endowed with the riches of this world—and there were many such who constantly sought his advice and skill—it was above all when confronted with the misfortunes of some poor client, some waif of fortune cast at his feet by the billows of adverse fate, that his great-heartedness was most completely revealed.

Sometimes it was a superannuated clergyman, who, while favoring him with a dissertation on the cosmogony of Moses, would interpolate a hint that the cause of sound theology would be much advanced by a modest donation. Again it was a lawyer without clients, or an inventor with a patent which no one could be induced to accept as a gift, much less pay for; or, perhaps, saddest of all, it was a doctor, worn out by the arduous duties of his profession and left in the evening of life—for no crime or personal omission—without health, houseless, hopeless, stranded. Ah, what words of ours shall show him to you at such a time as that! How can I paint him, as he sat in the well-worn chair, his brow lined with the records worn by thought, his locks silvered more by the care he took for others than by years. With what looks of tenderness and tremulousness of voice did he work his spell on the unfortunate, and rested not in word and deed till the demon of want had fled in very shame from the field.

Noble as were his feelings toward the poor and afflicted, the sentiments which he entertained with regard to his strictly professional obligations were, if possible, even more exalted. So sensitive was he in regard to matters which in the smallest degree involved the rights of others that he would frequently sacrifice his own interests—unnecessarily as it seemed to some—rather than incur the possibility, however remote, of misunderstanding. This is a fact so well known as to have obtained the grateful recognition of his *confrères* throughout the length and breadth of the profession.

Leaming's honor was indeed like that ascribed to Cæsar's wife—beyond the possibility of suspicion.

His conception of his duties to the profession did not stop, however, at a mere abstention from interference with the rights of others; on the contrary, during his long career as a successful practitioner he was constantly on the alert to aid in every way those who seemed worthy of his support. This was especially shown in his relations to the younger members of the profession, in whose several destinies he seemed to take an interest as sincere as it was unusual.

Particularly astonishing was the accurate knowledge which he possessed of the genius or acquirements of so many of the younger men.

I remember asking him one day how he was able to construct such an apparently faithful analysis of the mental resources of so many persons.

"You see," he replied, "I have been debarred of late years by indisposition of a physical sort from taking as active a part as I could wish in the work of the medical societies. But, in spite of this, I have been able to keep myself in pretty close *rapport* with what is being done by the younger men through the medium of the journals." Then rising, he showed me a chest of drawers filled to repletion with journals and scrap-books, whose monstrous store of clippings threatened momentarily to burst the bindings.

"These," he continued, "are my 'Doomsday Books,' and though they have cost some time and labor to arrange, I feel quite repaid, since at a moment's notice I am able to refer to most of the good things which have been done by the younger men during the last ten or fifteen years.

"In this way I am able to distribute such patronage as I have where it will do most good to the individual, and hence to the profession. For," he added, "I conceive it to be the duty of all physicians who are well established in practice to aid in every way possible those of the younger men who by their talents and application are really advancing the art."

At the time he gave utterance to this high-minded and disinterested sentiment he was stricken by the infirmities of advancing years and by serious disease.

Truly a finer example of conscientious devotion to the higher ideals of the profession, in the face of what to smaller minds would have been irresistible temptation to pessimism or *laissez faire*, has rarely been witnessed.

We have already dwelt upon the truly altruistic spirit in which Dr. Leaming met every reasonable, or even unreasonable, demand from without. But if his learning, professional fidelity, charity, magnanimity, and disposition to give an expansive meaning—a poetic interpretation—to even minor events of life have awakened unmingled admiration and respect throughout the profession, what pæans would have been sung to him could all have been witnesses of his rich home-life, all aglow with that broad hospitality, that mutual deference which springs from a heart that intuitively recognizes the fraternal relations of the whole human race! Kindness, all oblivious of self, was with him an instinct. Like some ancient Christian father, whose deeds of devotion were performed amid the darkness of the Catacombs, with none to witness his heroism save the eyes of the Omniscient, Leaming was ever ready to imperil his own interests in behalf of his fellow-men, without a thought of encomium, from which, indeed, he naturally shrank.

What wonder that the smiles of such a man should have drawn to his table all that makes for the best in our metropolitan society. Men high in scientific and literary achievements, in politics, in art, found in his house that warmth which makes the heart glow.

Thus only a little while before his death there was assembled one evening in his drawing-room a distinguished company. Among his guests was the President-elect of the United States, whom the hospitable host was able to regale with an exhilarating decoction drawn from a punch-bowl which originally belonged to Thomas Jefferson.

Is it possible to imagine a more delicate compliment from a host to his guest than the tribute which Dr. Leaming accorded Mr. Cleveland that evening?

The same gentle relations that he sustained to his patients he also maintained with his *confrères* in the profession. In this we perceive the source of his power and popularity as a consultant. It would, indeed, be difficult to say too much in praise of the tact which he displayed when called upon to perform this difficult function. The modest dignity of his address, the sapient glance, the benevolent smile, the reassuring words, and the unostentatious commendation of the efforts of the attending physician—what words shall do justice to our appreciation of it all? Truly an instinctive gentleness, a spontaneous interest in and regard for others made up the fundamental tone in his character. To infer from this, however, that he was devoid of the sterner virtue of courage, would be a grave mistake.

Dr. Charles W. Packard, who did all that active and skilful solicitude could accomplish for his comfort during his last illness, informs me that never in his long experience had he been a witness to greater fortitude and cheerful acquiescence in the decrees of the inevitable.

It was also my privilege to have seen him on several occasions in consultation with Dr. Packard, on account of the delirium and persistent insomnia which developed from time to time toward the last.

On these occasions I was also able to learn from his wife and daughter, who cared for him with rare devotion throughout his long illness, of that heroic spirit with which he was able to endure the severe suffering which destiny had in store for him. At last came the inevitable crisis, and on December 5, 1892, at seven o'clock in the morning, his career among mortals was ended.

In a narrative culled from the rich archives of oriental allegory it is related that, as a certain king lay dying, he complained of an oppression which the magicians of the court were unable to exorcise even with their most cunning incantations. When all were in despair, there suddenly appeared a poor minstrel, upon whom the king one day, finding him wounded about the chest by robbers had lavished costly ointments. Reminding the stricken prince of his former bounty, the minstrel, with tearful eyes, played upon his harp an air of surpassing loveliness, when immediately the dying man made known that all distress had left him, and he passed away as though in sleep.

Ah, could those suffering breasts to whom Leaming brought relief have sung his praises at the supreme moment, on what mighty waves of harmony would his spirit have been carried onward into the ocean of eternity.

I know that in discourses of this kind it has been the practice, in concluding the recital, to make an attempt at elaborate psychological analysis; to place in the scales, as it were, each mental trait, and then, by a simple process of addition, to find a more or less consistent explanation, usually less, for the thoughts and emotions of the subject, as well as the actions which were their direct issue. For my part, even though I had an inclination for such necromancy, I should certainly withhold my hand in the case of the man who constitutes the subject of this biography.

Dr. Leaming was indeed one of the loveliest, and, at the same time, one of the most picturesque personages to be found throughout the length and breadth of the profession.

A lover of precious stones, of which he had made a large collection, he little realized that his own character was the rarest gem of all.

So unique a personality should be dealt with in the spirit which makes for poetry rather than prose. In the brief recital just ended I have endeavored to show him to you as he was, not only just, but magnanimous; not only a medical philosopher, but a lover of the muses; not only sought for by the rich, but adored by the lowly, upon whom he preferred to shower benefits without the presence of an applauding audience.

Just how much of this rare combination of strong and lovable characteristics was due to heredity, and how much to fortunate coincidences of environment, let each decide for himself.

To me he seemed like an exceptional and beautiful creation—as are all great and good men, to remind us of the immeasurable possibilities of human nature.

Such attributes of the spirit cannot die; for though the physical casket in which they were enshrined for a season may pass away, their essence shall remain forever in our hearts as a glowing memory.

THE VAGINAL TAMPON AS A HÆMOSTATIC IN METRORRHAGIAS.[1]

By WILL B. DAVIS, M.D.,

PUEBLO, COL.

The introduction of objects of various materials into the vagina and against the os uteri, for checking the flow of blood from the womb—whatever the cause of the hemorrhage—is a practice as old as any known procedure in the history of gynecology.

To-day, the modern vaginal tampon holds a more useful place than the ancient, for the accomplishment of the same object; but more striking than the different methods of their application are the benefits obtained by the new over the old.

By the term vaginal tampon, in its modern sense, I mean the vaginal pack, systematically and methodically applied, as differing from the "hit or miss" old practice of shoving something up against the os uteri in the hope of inducing an intra-uterine clot. Besides, the object of the vaginal pack in such cases is not to produce such a clot, for no sooner than formed it would be, to all practical purposes, and play the part of, a foreign body in the womb, with whose behavior we are all sufficiently well acquainted. Hence the procedure differs in its rational application, and the method of application is different, in that it is systematically done, and with a different idea—we might say knowledge—of its effects from start to finish.

To better illustrate, I will relate cases in point from practice: Mrs. H——, a woman of delicate constitution, aged fifty, the mother of eight children. She had never before had hemorrhages from the womb, and supposed she had passed the menopause, not having menstruated at all for more than three years previous. When I first saw her, the hemorrhage had been continuous for nearly a week, and she had become much prostrated—which, in conjunction with a faulty nervous force, presented a complete picture of dilapidated helplessness. On digital examination I found the uterus completely retroverted. I replaced the organ, irrigated the vagina with hot water, and, getting the patient in the Sims position, and introducing a Sims speculum, began with small pledgets of wool, with cotton envelopes, to pack, first, the posterior fornix, posteriorly and laterally, full; then a pledget in front of this, on which the os rested; then one pledget after another until the vagina was comfortably filled—the last pledget being of full capacity, and pushed just above

[1] Read before the Pueblo County Medical Society, January 27, 1893.

the sphincter. I let this pack remain two days, and on removing, it was not even stained with blood. Besides, the patient seemed completely transformed. Though yet weak from the loss of blood, her general expression comported with a state of well being, aside from the lack of physical strength. After removing the pack, I fitted a closed lever Hodge pessary. Neither the displacement nor hemorrhage recurred. I believe that the reduction of the dislocation in this case checked the hemorrhage, and that it would have remained checked without the tampon, if it would have remained in proper position without its aid; but that I was not willing to risk.

Mrs. D—— had miscarried one month previous, at two months, at which time she was attended by one of our very best physicians, whose care, I felt sure, was all that was required from any standpoint. She had done remarkably well since the miscarriage, up to the day I was called, when she had been overtaken by quite a severe metrorrhagia. It being late in the night, and scarcely fearing very serious results, I gave laudanum and ergot, with injunctions to remain perfectly quiet. Returning early next morning, I found the hemorrhage had continued unabated, and was then as bad as ever. Getting the patient in the Sims position, and wiping out the vaginal clots, I packed thoroughly and completely. There was absolutely no hemorrhage afterward. The patient has menstruated regularly since, but has had no hemorrhage.

I could relate you case after case, differing only in detail, with equally good results.

In nearly all cases of simple metrorrhagias, if there is no other displacement of the uterus, we shall find a degree of prolapsus. These simple hemorrhages, in the majority of cases, come on about the time of the menstrual nisus. At these times the pelvic viscera are semi-congested, or engorged, to which physiological condition is added, by the displacement, venous obstruction—hence a true hemorrhage in a greater or less degree—a flow of blood that clots, in lieu of the menstrual discharge proper, which we know, when normal, never clots.

Neither does this limit the usefulness of the modern tampon in uterine hemorrhages. In hemorrhage from other causes, it will serve as a useful adjunct—not that it would control a hemorrhage induced by a fibroid or polypus, a carcinomatous growth, or ulcerations due to any cause, but in that it will relieve venous obstruction, which is very liable to exist as an accompanying condition on account of prolapsus due to an increased weight of the organ under such embarrassments. It would, in so far, reduce the whole amount of blood-flow in a given case of these troubles; nor would it prevent other temporizing measures that might be indicated.

I think the number of cases of simple metrorrhagia are greater here, in proportion, than elsewhere that I have practised, and the vaginal pack has served me well here, as elsewhere.

Conclusions.—The pampiniform plexus of veins is the principal medium of the return current of the uterine circulation. They are valveless, and situated within the folds of the broad ligament. Following these backward into the substance of the womb, we find not the vein proper, but a series of tortuous sinuses. Further back of this, and beyond the venous radicals, we find them ending in capillaries on the papillary interior surface of the womb, with nothing intervening between them and the uterine cavity except a very thin mucous membrane, which has the peculiarity of not possessing a submucous connective-tissue framework. Now, this is the picture from which we adduce, very reasonably to my mind, the conclusions that, comparatively speaking, we will have a hemorrhage from the mucous surface of the womb in consequence of a lesser degree of venous obstruction than from any other organ or mucous surface of the body; and that, with a given amount of obstruction we may expect, and will have, a greater flow of blood from a square inch of endometrium, than from a square inch of any other mucous surface of the body.

Again, in displacements of the womb we must have a degree of venous obstruction, especially in recent dislocations, and before the circulation of the organ has had time to adjust itself to such change. While this is so the arterial current continues quite or nearly as full as before, its vis a tergo being sufficient to overcome a flexure, or such pressure upon its branches as may exist in uterine displacements. Such being substantially the facts in the premises, the strangeness to my mind is not the frequency of metrorrhagias, but that, under such circumstances, we do not find them both more frequent and more severe than we do.

Anywise, are not the good results obtained by the intelligent use of the vaginal pack due, most likely, to a removal of venous obstruction by a replacement and maintenance of the organ more nearly in its proper sphere, thereby permitting freedom of the return current, than that the pack stanches the hemorrhage by limiting the amount of blood-flow to the womb, by pressure upon the pelvic circulation, as advanced by some, or to "toning" the uterus, as advanced by others.

We all know the effect of slight pressure in the course of blood-vessels on the extremities: that it is easy to produce venous engorgement; while to check the arterial flow requires a pressure too great for any tissue to bear very long without serious damage; and, *à priori*, the effect of any intra-pelvic pressure by the vaginal pack, if it could be made to obstruct the uterine circulation directly at all, would be greatest, if not altogether, upon the veins, and would thereby defeat the very objects of a practice based upon any such theory.

And as to the impartation of instant tone to a uterus that may have been atonic for some time, to such an extent as to enable it to absolutely and at once stanch a flow of blood from itself, I am not prepared to accept.

Clinical Department.

REPORT OF A CASE OF NÆVUS UNIUS LATERIS.

By CUTHBERT R. BARHAM, M.D.,

PITTSBURG, PA.

The following report may be interesting to some on account of the rarity of the affection. So little is known as to its etiology, and so far treatment has been of such little benefit that it is hardly necessary to discuss it. I give below a short history of the case, with description of the lesion.

J. M——, male, aged twenty-five. Occupation, stenographer. General condition good. Parents healthy. He consulted me for a persistent eruption on the cheek, thinking it eczema. I found on examination the following: On the right cheek, and extending down on the chin, there was a number of red papular nodules, grouped as follows: On the chin, just to the right of the median line, there was a space about the size of a half-dollar, covered with thickly set, red elevations, each having a horny cap which could be removed with the curette, leaving a depression. Over the whole surface supplied by the trigeminus of right side (two lower branches) the skin was found rougher than on the other side, and at intervals were found horny growths similar to those on the chin. On the palmar surface of the end of the middle finger of the right hand was an area presenting marked roughness, a warty growth, in fact, with horny projections arranged roughly in lines from above downward. On the back, in the lumbar region, slightly to the right of the middle line, were found two areas, each the size of a dime, reddened, scaling, and slightly pigmented. On the right side of the scrotum and inner front aspect of the right thigh, was an appearance very much resembling eczema squamosum, the surface was slightly reddened, scaling, and indurated. The scales were hard,

adherent, and here and there was a horny projection. There was a tendency to grouping of these projections into lines. On the inner aspect of the big toe of right foot was an appearance resembling a callosity, but rough, and presenting the same horny projections noted above.

The above lesions had been present from birth and gave very little trouble, and had not increased in size noticeably. The induration, the patient thinks, has increased in the patch on scrotum during the last two years. The two points which gave rise to trouble were the face, which was sometimes irritated by shaving, and the thigh and scrotum, which became irritated in hot weather. At no time has he observed any appearance on the left side. One spot formerly on the right leg (inner aspect) has disappeared, leaving a pigmented area with slight roughness. The affection was first pointed out by Royer,[1] and later described minutely by Bärensprung,[2] who reported several cases under the name used at the beginning of this paper. Simon[3] also called attention to it under the name of nerve nævi. Gerhardt[4] reported two cases under the same title used by Bärensprung, with description. Neuman[5] has given a complete bibliography and rather full discussion in 1878. Cases have been reported from time to time since Neuman's monograph. As to its etiology, it is considered by the majority to be congenital, though Schwimmer reports a case where it first made its appearance at the age of five years. Kopp denies the theory that it depends on intra-uterine affection of the spinal ganglia and ascribes it to congenital abnormal arrangement of the smaller blood-vessels along the course of the peripheral branches of certain nerves. Crocker refers to it in connection with ichthyosis, and apparently considers it a variety of localized ichthyosis. Treatment gives little benefit, and when attempted is best directed to removal of growths by excision when troublesome, or gradual removal by painting with strong solutions of salicylic acid and curetting.

Westinghouse Building.

OPIUM IN SHOCK AND PNEUMONIA.

By W. WASHBURN, M.D.,

NEW YORK.

Under date of November 12, 1892, in the Medical Record, Dr. Dawbarn gives us some history of cases where "arterial saline infusion" is used. These seem to indicate the usefulness of the method after the case had arrived at so serious a pass as to require extreme measures; but while such things—new—are always coming up, we should not forget our old and tried friends, especially if with them we are enabled to prevent the sad condition that calls for the more severe remedy.

Opium has long been used in shock, but I fear its action has too often been carelessly regarded—as likewise the fact that patients do not die from shock directly, but rather from the collapse that follows. Bearing this in mind, the remedies we look for as likely to aid us are evidently stimulants, especially those that act on the nervous system most directly, powerfully, and permanently, without any other effect.

Ammonia and amylnitrite are too transient in their action. Alcoholics are not true stimulants, but opium has long, and I believe justly, held high rank among remedies for shock; but, as I have said, not so much because it benefits the patient while suffering from shock, as because it often prevents the collapse. How, then, does opium, or morphine, which is the best form to be used, act in collapse? Opium is a narcotic, and as such has a double action. The first action is to stimulate the nerve-centres and then to depress, much the same as alcoholics: hence, to obtain continued stimulation, small and frequent doses must be taken, so that the stimulant effect of a dose may be felt before the depressing effect of the former dose comes on, and thus we have a continuous stimulant.

Not only is opium of great use in the collapse that follows surgical shock, but I have found it of the greatest possible service at the critical stage of pneumonia, which is only another form of collapse. It has been my custom to use brandy and carbonate of ammonia as everyone does, but not to rely on them at the crisis.

My plan has been to begin with one eighth grain morphine every two hours as soon as the pulse showed that it did not respond to the brandy given frequently. Any sign of flagging has been met with an increase of dose and a shortening of time between doses, until in a number of cases I have given one-quarter of a grain every hour for two days with no suspicion of narcotism. Of my last thirty-eight cases thus treated at the critical time, all recovered except three, aged, respectively, eighty, eighty-one, and eighty-five years.

Care must, of course, be taken that the doses are not omitted, or else the drug would, by its secondary effect, carry the patient down. So, too, when the crisis is past we must slow down gradually, first lessening the amount of a given dose and then lengthening the time between doses. Of course only uncomplicated cases are included in this number. Many of the cases were seen by our most prominent physicians and the diagnosis confirmed. One case, where there was first two carbuncles, then erysipelas followed by pneumonia, the patient, seventy-four years old, also recovered.

It is, however, proper to state that not all the credit should be awarded to opium thus administered, for in none of my cases are poultices used. I believe that the pneumonic process is extended by the exposure incident to the changing of the poultices, and therefore use an oil-muslin jacket lined with cotton, taking care to see that it is nicely quilted to prevent any rolling up of the cotton. In this way all portions are protected alike. The poultices only give us moist heat, and this is secured without exposure to cold by carefully rubbing white vaseline on the chest, leaving not only the jacket but the bedclothing as much as possible undisturbed.

The death-rate I have shown, low as it is, is much the same as was obtained in the New York Hospital years ago, before some of our new methods were in use. My authority for this is a former physician to that hospital. When we remember that statistics recently published in Berlin gives as high as forty and fifty per cent. as the death-rate with some forms of treatment, we are again reminded that a proper use of tried methods should not be abandoned until others are proven better. Rather let the new supplement the old.

RECTAL IMPACTION BY PINION-SHELLS.

By J. TRACY MELVIN, M.D.,

SAGUACHE, C. L.

Three cases of rectal impaction from an unusual cause have come under my observation during the past week, and the paucity of literature upon the subject is my excuse for reporting them.

The offending substances in these cases were shells of the pinion-nuts, a very small nut with a thin shell, and very plentiful throughout the mountains. The boys who required my services had been gathering these nuts for the market, and had eaten a quantity during the day, masticating shells and all. Three days later the father of the youngest applied to me for medicine to open the child's bowels, a tablespoonful of castor-oil, given the night before, not having produced any result. The next morning the father reported no result from any of the cathartics given. I found a four-year-old boy, with very tympanitic abdomen, pulse 120, temperature 101° F., suffering much pain, but no tenesmus. On trying to give an injection of glycerine, the syringe point came in con-

[1] Maladies de la Peau, 1835, p. 654.
Annalen des Charité-Krankenhauses, 1863, vol. iii.
[2] Archiv. für Dermatologie, 1872, p. 24.
[3] Jahrbuch für Kinderkrankheiten, 1871, p. 290.
[4] Vierteljahrsschrift für Dermatologie, 1878, p. 466.

tact with a hard mass, which examination showed to be entirely composed of pinion-shells. The mass was dry and very hard, greatly distending the rectum. The stream from a fountain-syringe made no impression upon it, and it was only after stretching the sphincters with the finger and breaking the mass up a little at a time with tenaculum and forceps, in the presence of a stream of water from the fountain-syringe, that a teacupful and a half of these shells were removed. After this an enema of glycerine procured several copious fecal movements. The other cases were similar, but the boys were older and the obstipation had lasted five and six days. In each case the mucous membrane of the rectum was badly lacerated by the sharp edges of the shells. My previous experience with cherry-stones and water-melon seeds, in similar cases, never showed such an absence of fecal matter and absolutely solid impaction.

THE TREATMENT OF DIPHTHERIA.

By JAMES L. GARDNER, M.D.,

PORTLAND, CONN.

During the past eleven years I have had recourse to several methods of treatment for this disease. By all means the best, to my mind, as borne out by experience, is a fifteen to twenty-five per cent. solution of tr. chlor. ferri et tr. iodini in a menstruum of glycerine and water, or pure water. This should be applied locally to the fauces with a tooth-brush or post-nasal syringe, and should be used as often as every three hours, day and night. Tincture of the chloride of iron, reduced largely with water, is very effectual as a gargle, and as a solvent of the membrane. I also administer ferri chlor. tinct., fifteen to thirty drops in water, every four hours, according to the age of the patient, or a formula like the following:

℞.	Ferri chlor. tinct.	ʒ vj.
	Acid. dil. phos.	ʒ iv.
	Sol. strychniæ.	ʒ ij.
	Sulph. quiniæ.	ʒ ij.
	Aquæ et glycerini	āā ʒ j.–ʒ iv.
M.	Sig.: ʒ j. every five hours, in water.	

Beef extracts, spts. frumenti, opii, milk, etc., *ad libitum et pro re nata*, or in sufficient quantity to maintain the patient's strength and nourishment. If physicians will apply this plan of treatment diligently and in season, very few fatalities, I think, will need to be reported.

HYPNOTISM PRODUCED BY THE PASSAGE OF A URETHRAL SOUND.

By ROBERT BOYD, M.D.,

ASSISTANT SURGEON, U. S. NAVY.

A. R——, male, aged twenty-two; unmarried; occupation, sailor; suffering from gleet of three months' standing. Internal medication and injections proving unsuccessful, the "sound treatment" was resorted to. The patient being in a recumbent position and lax, a No. 15 steel sound, previously asepticized in carbolic solution (1 to 40), and anointed, was carefully introduced, meeting with no obstruction. At first the patient complained of slight discomfort, but speedily lapsed into a state of quietude, closing his eyes and apparently unconscious of his surroundings. On withdrawing the sound the patient remained quiet, as if asleep, until spoken to in about a minute. As he complained of feeling very sleepy, he was recommended to lie down, which he did, sleeping soundly for two hours, to arise much refreshed, both mentally and bodily. It was the first time a sound had been passed. No cocaine or any anæsthetic was used.

The only logical conclusion is that there was an orgasm, although there were no objective signs (which may have been prevented by the presence of the sound), and the patient states there was no sexual pleasure. The urine was not examined. The patient's general health was much impaired from recently acquired syphilis, for which he was also being treated. The same treatment was administered a week later; there was a repetition of the previous phenomena, but not so marked. On passing the third and last sound (No. 18), three weeks after the first, nothing unusual was noted. His gleet was cured. I mention this case, as the treatment generally causes anything but a passive state.

Keyes, in his work on "Genito-Urinary Diseases with Syphilis," p. 38, says: "Occasionally distention of the prostatic sinus produces a partial venereal orgasm," but he says nothing about mental or nervous changes being produced.

U. S. S. PHILADELPHIA, NAVY-YARD, NEW YORK.

A CASE OF POISONING BY METHYL-BLUE.

By JOSEPH DRZEWIECKI, M.D.,

LATE PHYSICIAN TO THE UNIVERSITY CLINIC OF THE HOLY GHOST HOSPITAL, WARSAW, POLAND.

W. C——, an engineer, who had suffered from atypical malarial fever one year and a half, had been successfully treated with arsenic and quinine (the latter was also applied hypodermically), applied to me on May 16, 1892. Besides the yellow discoloration of the face and a somewhat cachectic appearance, special attention was attracted to the extraordinary size of the spleen, which extended to the median line of the abdomen and three fingers' breadth below the costal margin; all the lymphatic glands which were accessible to examination, were also swollen. After the use for two and a half months of nitrate of strychnine, with interruptions, the patient improved considerably, felt much stronger, and the spleen diminished at least to half of its size. The attacks of fever, however, although they became less frequent and less violent, did not cease to trouble him.[1] What, however, is worth noticing is that during the attack of fever the thyroid gland swelled considerably, especially its right portion, looking like struma, so that the patient was obliged to wear wider collars; with the disappearance of the fever the tumor disappeared on the second day. One of his former physicians meeting him on the street, assured him that he possessed a new and infallible drug which would cure him, and he was, of course, induced to follow his advice. He received, on August 10th, methyl-blue, forty powders, everyone containing 0.20 gram. The first day he took three powders. An hour after taking the first powder he remarked that his urine was of a greenish color, but as he had been informed that this would appear, it made no impression upon him at all. Gradually the urine became more and more colored till it got to be quite blue; on this day the stools also were of a greenish color. The next day he took four powders; before evening of the same day he had pain in the abdomen and some strangury in passing urine, and in the evening vomited some slimy, bluish masses. This made him uneasy and he went to his physician, who convinced him that all this was known before, and advised him to continue the treatment. On August 12th (third day of taking the medicine) he suffered from strangury, pain in the abdomen, and diarrhœa. On the 13th he had such a sudden desire to urinate that he could not keep the urine back, even for a few seconds, and he remarked that the last drops were pure blood. During micturition he had insufferable cutting pain, worse than with gonorrhœa, as he says. He applied on August 14th to the same physician, but met only his assistant—the former being abroad—who again prescribed methyl-blue with opium; every powder contained 0.15 gram of methyl-blue and the same quantity of opium. The patient took four powders daily during two days, and on August 16th came to me complaining of frequent insup-

[1] Before the treatment with strychnine the paroxysms appeared in intervals of ten to twenty days, and they lasted from ten days to two weeks; under the influence of strychnine they set in once a month or three weeks, and lasted from three to five days

portably painful micturition, the pain being especially marked at the end of the penis, urging to urinate, and blood at the end of every micturition; stools several times daily, with tenesmus without pain. The desire to urinate was accompanied with the desire to defecate, but the latter disappeared after urination. After a milk diet of five days, Vichy water, and warm sitz-baths, these symptoms disappeared entirely.

This case deserves attention for the following reasons: 1. From the participation of the thyroid gland in the attacks of fever. 2. From the certain special action of methyl-blue on the bladder, urethra, and in a less degree on the bowels. 3. That this drug, the physiological action and chemical property of which are very little known, was applied and continued even when the symptoms of poisoning had appeared. I must add that this drug did not interrupt the further attacks.

87 Krakowskie Przromiescie.

UNUSUAL ETIOLOGY OF FRACTURE OF THE TIBIA.

By ROBERT BOYD, M.D.,

ASSISTANT SURGEON, U. S. NAVY.

J. McC——, male, aged thirty-five; occupation, sailor. While walking on the wet deck he slipped and fell, doubling his leg under him in a position of extreme flexion and external rotation. On examination there was found a comminuted fracture of the lower third of the left tibia. The fracture was carefully set, a felt splint and bandages were applied, the leg was swung, and the patient was placed in a recumbent position in bed. Four days later the patient was doing well; the temporary splint was replaced by plaster-of-Paris bandages, as there was no swelling of the parts, and the fracture was in good apposition. The knee- and ankle-joints were immobilized.

The patient had been from the first very comfortable; there was no elevation of temperature and but slight pain at times; he slept well and had a good appetite. On the twentieth day after the injury the bandages were removed and similar but lighter ones applied. The patient's general health continued good, and the fracture was uniting well; he was now able to go on crutches and suffered no pain on a moderate amount of walking. Seven weeks after the injury the patient was able to attend to his duties.

There is no marked shortening of the extremity; by measurement it is less than one-fourth of an inch shorter than opposite leg, and there is no deformity.

A CASE OF ERYSIPELAS CIRCUMSCRIBED BY THE KRASKE METHOD.

By P. A. McINTOSH, M.D.,

THOMASVILLE, GA.

Willis Q——, aged eighteen months. I saw the patient in the forenoon of December 20th. He then had high fever; the tongue was red and parched, the thirst was intense, and the pulse was rapid and forcible. The child was nervous and excitable. My attention was called to an abrasion on the inner side of the knee. There was considerable œdema, and a circumscribed deep-red or rose-colored spot covering an area of several inches. I diagnosed erysipelas, and ordered the following treatment:

℞ Quinine,
Antifebrine.....āā grs. xij.
Pulv. Doveri..... grs. vj.
M. Ft. powd. No. xij. Sig.: One every third hour.

Also:

℞. Tinct. ferri chlor..... ℥ iv.
Glycerine..... ā ā ℥ j.
Sim. syr..... ℥ iij.
M. Sig.: Teaspoonful every three hours.

I also used a local application of carbolic acid and glycerine, and instructed the mother to notify me in the afternoon if the disease should spread. About five o'clock I was summoned again, and found the disease spreading in every direction. I scrubbed the leg above the knee with soap and warm water, and with a four-toothed vaccinating scarificator, by sharp, quick scratches, I made a bleeding belt, about two inches above the knee, entirely encircling the limb. I immersed some strips of iodoform gauze in a 1 to 1,000 bichloride of mercury solution, applying several strips on the bleeding surface around the leg, following this with lint and a roller bandage. I allowed this dressing to remain till the third day, when I removed it. The disease in the meantime had invaded the lower part of the leg and foot, and had extended upward, all around the leg, to the very line of the incision I had made, but in no case did it cross. The patient made a good recovery.

The streptococci were introduced into the system through the abrasion. The two-toothed instrument devised by Dr. Seibert, of New York, is a good one for the use for which it is intended, but the usual scarificator serves the purpose well, as it is only desired to scratch through the epidermis in order that the solution may be absorbed by the skin. If the rules of asepsis be observed, by the time the streptococci have run their course and died, the wound made around the leg will also be healed.

TREATMENT OF TRACHOMA.

By WILLIAM TANNER, M.D.,

SIOUX FALLS, S. D.

Trachomacocci, these microbes with a long name surely exist in the conjunctiva of a trachomotous patient, whether they can be demonstrated or not by everyone who uses a microscope. How many varieties of them may exist, the writer is not prepared to state. If every variety of "granulated sore eyes" has a different family of germs, as a close observer is led to believe, there must be several varieties of trachomacocci, some very tenacious of life, others easily destroyed. The follicular form of trachoma is the most easily curable, but that form characterized by little, red, projecting, sharp points the writer has found to be exceedingly obstinate. If there is any condition of the mucous membrane of the lids where the use of the sharp spoon would be justifiable it would be in this variety of trachoma; but as the use of the sharp spoon, to be effective, would necessarily destroy the mucous membrane of the lid, producing ugly cicatrices and an imperfect cure, the following plan has been adopted: Evert the lid and anæsthetize the mucous membrane with a strong solution of cocaine; then make deep incisions down to the tarsal cartilage, parallel with each other, and as close together as they can be made with a steady hand and delicate touch. By this manœuvre we destroy the breastworks of the enemy, and then, by a few death-dealing broadsides from our stiff brush and corrosive chloride solution (1 to 300), we destroy him. The writer has found a soft toothbrush an admirable weapon to dredge the cuts with; but he has not found one treatment sufficient for a cure. On the contrary, several daily, or bi-daily, brushings will be required, for the trachomacocci of this variety are extremely tenacious of life, and are reproduced rapidly. To prove this assertion, let the oculist stop short of a cure for a few days or weeks. The pannus, which had almost cleared away, and the granular membrane, which had become almost smooth, will have become re-established. Another most important point in the treatment is thoroughness. In the *cul-de-sacs* are abiding-places for trachomacocci and to reach them in such a way as to effectually destroy them, we must perform canthoplasty. By this treatment the writer has seen opacity and vascularity of the cornea, so dense as to cause as complete blindness as a perfectly ripe cataract, clear away entirely in a few weeks.

The scratching and pain which sometimes follow this is completely relieved by a drop of a one gr. sol. of eserine. Dr. Knapp's little roller forceps is a very effective contrivance for the purely follicular variety of trachoma.

INCARCERATED HERNIA RELIEVED BY WASHING OUT THE STOMACH AND THE USE OF CROTON-OIL.

By H. F. EICHACKER, M.D.,

NEW YORK.

The following case seems to be worthy of publication on account of its complications as well as of its good results.

Mrs. S——, seventy-two years of age, corpulent, and still very active, has suffered from an umbilical hernia since her eighth year. This condition prevents her from lying upon her back more than five minutes at a time, on account of pain felt around the umbilicus when lying in that position.

Besides this umbilical hernia, she acquired a left inguinal hernia about four months ago, while trying to pull a clothes-line.

The usual treatment was resorted to without any effect. Operation was not permitted. Ice was not well borne by patient, and it was also impossible to apply it on account of her inability to rest upon her back.

The patient then took, in spite of my warning, four compound cathartic pills, and this had the desired effect; the hernia was reduced and the patient was well again until November 24th. On that day she became again constipated, and complained of headache and pain in the left inguinal region.

November 27th, I was called again, and found upon examination a reappearance of the left inguinal hernia.

The same treatment as mentioned above was resorted to, even the cathartic pills were not omitted by the patient, but no result followed, and even enemata only brought away fecal matter from the colon.

November 29th, patient commenced to vomit fæces and bile, became feverish, and was getting restless and delirious. Morphine, gr. $\frac{1}{6}$, hypodermically, gave only temporary relief.

On December 2d, Dr. G. L. Peabody saw the patient in consultation with me. Again we could not convince the family that an operation was in all probability the only thing which could save the patient's life.

The idea of washing out the stomach was considered by me, but on account of the precarious condition the patient was in at that time was not carried out.

Dr. Peabody urged me to do this by all means, as there were cases on record where life had been saved by this procedure.

December 3d, the patient vomited almost continually, the pulse ran up to 120; temperature, 102° F.; she was extremely restless, and had some delirium. As there was no hope of recovery then, I had the patient lifted into an arm-chair, two assistants held her, and I, with great difficulty, forced the siphon tube into her stomach.

The washing was done well, about three quarts of lukewarm water had to be used before the returning water was clear. Twenty minims of Hoffmann's anodyne were given, hypodermically, after the patient was carried back to bed. In the evening morphine, $\frac{1}{6}$; atrop., gr. $\frac{1}{100}$; had to be given to control the pain in the stomach and pharynx. Small pieces of ice were given for fever and thirst.

On December 4th the woman had not vomited during the night, but in spite of her remonstrances I decided to wash out the stomach again, and to my surprise only a very small quantity of bile was found there.

The patient's son informed me that he thought that his mother had passed some flatus during the night, but that he was not positive.

During the day morphine and quinine suppositories were given to keep the patient quiet. On the following day the patient's son told me that he was now positive that flatus had escaped during that night. The woman herself could not give any information, as she was always in a half-comatose condition. I now thought that a drastic purge would (if ever) produce perhaps a movement from the bowels.

Therefore, one drop of croton-oil was given in ʒ ss. of oil emulsion. Immediately afterward flatus and the enema, which had been retained, escaped. Eructations had stopped. Three hours afterward another drop of croton-oil was given, which brought forth at first hard, nutlike fæces, later, softer material in enormous masses.

The hernia had disappeared. The after-treatment consisted of weak coffee in small and repeated doses, and powders consisting of: salol, gr. x.; bismuth subnit., gr. xv.; pulv. rhei., gr. iij.; magnes. ust., gr. v., to be given every three or four hours until the stools were less offensive and of a natural color.

On December 10th the patient, although very feeble, was sitting up and ate semi-solid food with good appetite, and on Christmas-day she went to church.

TYPHOID FEVER, WITH NOTES AS TO THE USE OF STRYCHNIA SULPHATE FOR COLLAPSE DUE TO NEITHER HEMORRHAGE NOR PERFORATION.

By H. PERCIVAL PARR THOMPSON, M.D.,

WOODSTOCK, VA.

During the greater part of the year the scourge of the beautiful Shenandoah Valley, so often justly termed the garden spot of Virginia, is typhoid fever, that dread malady upon the specific treatment of which no *fiat lux* has ever been pronounced. I am aware that enough has been written upon this disease to fill volumes, and my only apology for adding to this great mass of literature is the hope that this brief sketch may prove of some slight benefit.

By way of preface, allow me to state my usual plan of treatment for the adult. If the patient is seen early and the bowels are constipated, I give hydrarg. chlor. mit., gr. $\frac{1}{20}$ to $\frac{1}{10}$; pv. ipecac, gr. $\frac{1}{20}$; podophyllin, gr. $\frac{1}{10}$; sodæ bicarb., gr. ij., in each pill, every one or two hours until the bowels are moved, or until sixteen doses have been taken; and if there is no movement within three hours after the last dose is taken, one-sixth of a seidlitz powder is given every hour until the desired result is accomplished. If, however, there is diarrhœa when the case is first seen, pil. plumb. ac., gr. ss. to 1, et opi pv., gr. ss., is administered every two to four hours, according to the profuseness of this condition, until it is checked. At the same time I begin with the following treatment, which is kept up throughout the disease: Quinia (bisulph.) in tonic doses, gr. ij., and a diaphoretic, preferably spts. æth. nitr., gtt. xxv., every four hours, day and night. The diet is four to six (rarely as much as six) tablespoonfuls of milk every two hours. I never give an antipyretic unless distinctly indicated; *i.e.*, unless the temperatnre is above 103° F. I then give antikamnia, acetanilide, or phenocoll, two and one-half grains, every three or four hours until it falls to 103° F., when the drug is immediately discontinued. It rarely requires more than one dose to reduce the temperature to the desired point, 103° F. A temperature of 102° to 103° F. in typhoid does no harm; it is the natural course of the disease, and any attempt to interfere too officiously with it, by the indiscriminate resort to antifebrics is almost invariably followed by untoward results, especially heart-failure. It is extremely seldom that I use a stimulant in typhoid, from inception to convalescence; for I have found that this increases the tendency to hyperpyrexia, accelerates and enfeebles the pulse, predisposes to hemorrhage, and induces a depression of vital energy, the patient dying of asthenia, not from the disease *per se*.

If the beginning of convalescence is tardy, a mixture

of ol. terebinth, gtt. v. to x.; mucil. acac., ℥x.; glycerine, ℥xx.; and aq. menth. pip. ad ℥j., every four hours, will hasten the healing of the intestinal lesions and accelerate recovery. If, after convalescence is established, it is unusually slow, ℥j. spts. fru., t.i.d. after meals, and ac. h. cl. dil. or ac. sulph. dil., ℥iij. to v. in water, t.i.d., before meals, will prove of much benefit.

The above treatment has afforded me the greatest satisfaction, and I take pleasure in recommending it. During this year 1892 I have treated fourteen cases, all successfully, by this method. Excessive tympanites rarely appeared, and when present was readily relieved by salol, grs. v., every four hours, and turpentine stupes. The tendency of the day seems to be toward over-treatment or rash empiricism, and the causes are to be found in the wild rush for fame or notoriety engendered by competition upon every hand, or in the innumerable chemical products which annually flood the market, each one claiming paramount virtues. Medicine is essentially an empiric science, and I would be foolish to advocate cessation of experimentation; neither would I close one laboratory; but the ruthless discarding of old, tried, and true remedies for uncertain innovations is to be deplored. In the instance of typhoid I allude to the so-called German method, which excludes quinia altogether. I tried it conscientiously in the City Hospital of Charleston, S. C., and it proved beautifully useless: two out of the cases in which it was used ending fatally.

Allow me now to ask attention to the use of strychnia sulphate in the treatment of that peculiar state of collapse, occasionally seen in typhoid, due not to hemorrhage nor perforation, but, apparently, to the toxic effect of the typhoid germ upon the system, especially the nervous apparatus.

The first time I resorted to this drug under these circumstances was during the past summer. My patient, a young man aged twenty-two, was suffering from a relapse after having had a severe attack of the fever. His temperature had been ranging from 101° to 102° F., and, all things considered, he bade fair to recover, when I was sent for in great haste, and upon my arrival found the patient in a state of collapse, perfectly comatose; temperature, 93° F.; respiration, 8 to 10; heart-beat, 36; pulse imperceptible at the wrist; pupils, dilated and skin pallid and covered with cold, clammy perspiration. Just previous to my arriving there had been a simultaneous evacuation of bladder and rectum, and upon examination no trace of blood was found. The nurse said that the patient had glided so softly and slowly into this condition that she thought he was asleep. The abdomen showed very little tympanites; hence I abandoned the idea of hemorrhage or perforation, which I had at first entertained, and began vigorous stimulation. I used whiskey, ether, and digitalin cum nitroglycerine hypodermically, with no visible effect. I was at my wit's end as to what I should next resort, for persistence with the above medication seemed useless, when it suddenly occurred to me that strychnia might be the one thing needful. Its powerful rejuvenating influence upon deteriorated vital force tempted me to make the experiment—it was a *dernier ressort*—so I injected gr. $\frac{1}{30}$ and waited fifteen minutes, when temperature was still 93° F. and pulse imperceptible. I then injected gr. $\frac{1}{60}$ and waited another quarter of an hour, when a slight improvement seemed manifest; though pulse was still imperceptible, I thought I could detect an improvement in the "tone" of the heart-beat, and temperature registered 93.2° F. I then injected another sixtieth of a grain, and again in fifteen minutes; temperature, 94° F.; heart-beat, 42. Since no physiological effect of the drug was apparent, I again injected gr. $\frac{1}{60}$ and waited fifteen minutes; temperature, 94.8° F.; pulse, 54, and just perceptible; dose not repeated, and in half an hour temperature about 95° F. I then repeated the dose, and in about fifteen or twenty minutes there was some slight muscular twitching of the flexors of the forearm, which I did not know whether I should attribute to subsultus tendinum or to the drug; and though I inclined to the former view, I did not repeat the dose at the expiration of the half-hour, because the temperature then registered 96.2° F. In fifteen minutes, temperature 97° F.; no repetition of the dose for half an hour, when temperature seemed still about 97° F. I then gave gr. $\frac{1}{12}$, with a rise of a degree and two-tenths to 98.2° F. in half an hour; and in half an hour more, temperature 99.8° F.; pulse, 120. I then began medication by the mouth, giving strychnia, gr. $\frac{1}{60}$; salol, grs. v.; quin. bisulph., gr. ij.; and spts. eth. nitr., gtt. xxv., every four hours. The milk was peptonized and given in the usual quantity, four tablespoonfuls every two hours. On the succeeding night patient had a similar collapse, when I pursued the same plan of treatment, with like results; and after this he made a good recovery. In conclusion, I have tried this treatment in two other cases presenting the above phenomena, with recovery in both instances.

I do not claim that this treatment has never been used before, but it is entirely original with me, and if it has been previously used and recorded, I would be glad of more light upon the subject.

Progress of Medical Science.

Infantile Respiratory Spasm.—Dr. John Thomson records five cases in which this curious condition had existed (*The Lancet*). It is also known as congenital laryngeal stridor, or infantile laryngeal spasm, and Dr. Gee has described a similar condition under the term "respiratory croaking." Of Dr. Thomson's five cases, three were boys and two were girls, whereas in all previously recorded instances where the sex is mentioned it seems to have been confined to girls, and the condition is often said to occur only in female children. As regards family history and general health, there was nothing of very great significance, except that in four of the cases more or less indigestion was present. In none of the patients was rickets apparent when the children were first seen, but it appeared later in those longest observed. There was no sign of congenital syphilis in any of the cases, and intellectual development seemed perfectly good. The onset of the stridor was noticed in three instances immediately after birth, but in one instance it was not observed until a week, and in the other a fortnight later. As regards the course of the malady, Dr. Thomson says that in severe cases the stridor goes on increasing in loudness during the first two or three months, and then tends to subside spontaneously, and as improvement goes on the intervals become longer and the sound less loud, that accompanying inspiration, the crowing sound, disappearing first, while the croaking may still be present at times. After the stridor has ceased to be heard under ordinary conditions, it may reappear if the child is specially excited or angry; when the stridor is present inspiration begins with a croaking noise and ends in a high-pitched crow. When the breathing is quiet the latter does not occur. Expiration is accompanied by a short croak when the stridor is loud, but at other times it is noiseless. As regards other symptoms, the indrawings of the chest-wall and the episternal notch were well marked in four of the cases, but the alæ nasi did not move with respiration, and there was a striking absence of distress or cyanosis. Variations in the intensity of the sounds were not uncommon, and there were occasional intermissions, even when the condition was most constant and severe. The sounds were notably intensified by mental perturbation, more so, apparently, when the child was excited and apprehensive than when actually crying. Sleep seems to have no constant effect on the condition, and it does not cease when the tongue is depressed, nor even when the nostrils are closed, and when the child is taking the breast there is still sufficient air entering the nostrils to

cause loud stridor. The effect of the ailment on the general health is not great, and the most effective treatment apparently is by regulation of the diet and other general precautions. Dr. Thomson regards the condition as due to spasmodic muscular contraction, the cause of this being some central disturbance of function, and he considers it closely analogous in nature and etiology to ordinary speech stammering, both being the result of defect in the proper co-ordinating mechanism.

Gouty Affections of the Intestines.—Dr. Haig maintains that a large number of cases of colic, enteralgia, enteritis, and some which are clinically indistinguishable from typhlitis, are really due to a gouty irritation of the fibrous tissues in the walls of the intestine. From his personal experience, which first directed his attention to the matter, and the results of treatment in his own and other cases, he has been gradually led to the belief that the colic and enteritis produced by such metals as lead, mercury, zinc, copper, and manganese are due to gout of the walls of the intestines. It has been pointed out that these metals, and certain other drugs mentioned, form insoluble compounds with uric acid, and it is suggested that the urate of the metal, or other insoluble urate, is deposited in the walls of the intestine, and gives rise to the irritation in question. In Dr. Haig's case the attacks were brought on by cocaine, by mercury, and by cold. He further suggests that many cases of typhlitis have a similar origin, and that there is frequent clinical connection of this trouble with gout or rheumatism. As regards treatment, the drug which is most useful in all these conditions, salicylate of sodium, is also that which is by far the most useful drug in the arthritic irritations produced by urates. This drug, acting as a solvent of uric acid, will break up and remove the urate, with whatever metal it may be united, and at once relieve the irritation as in the case of the joints. His experience in these cases, and also in cases of lead colic, encourages him to hope that others will give it a trial in similar cases, which he believes to be much more numerous than is generally supposed.—*The Medical Press and Circular.*

Observations on Perityphlitis.—According to Professor Sahli, the various inflammatory conditions designated under this head represent an infection of the cæcum or vermiform appendix. Their severity depends on the actual cause of the disease, and the starting-point does not explain everything in the clinical picture. Non-perforating forms may run a severe course, and perforating ones a mild one. Perforation is not explained solely by the mechanical condition of a concretion, but by the intensity of the inflammation. The division into typhlitis stercoralis and appendicitis is not tenable. The swelling which is felt in so-called typhlitis stercoralis is not fæces alone, but much more often exudation and inflammatory infiltration. It feels harder than in appendicitis, because it is a less virulent and more adhesive inflammation. Apparently in the majority of cases typhlitis stercoralis is a less virulent form of appendicitis. Sahli believes that constipation has a certain etiological relation, but that the retention of fæces is not the primary cause. Purgatives or large enemata penetrating far up should not be used. Opium should be given to control the pain, and not to produce narcosis. Constipation need cause no trouble, as with the moderate use of opium the bowels act spontaneously. Rest in bed is, of course, necessary. The treatment should be begun by exclusion of all food by the mouth, the thirst being controlled by small enemata of water at body heat. In very troublesome cases water can be introduced subcutaneously, or even saline solutions injected into the veins. The author does not look upon the ice-bag as useless, but later in the disease he prefers warm applications. The majority of cases of perityphlitis recover with or without abscess, with or without perforation into the bowel, etc., and this holds good for those cases which answer to Roux's description f suppurative appendicitis. The question should be as to which cases ought to be operated upon, and not as to whether perityphlitis should be treated by operation or not, because exclusive operative treatment of a disease which generally ends favorably is difficult to justify. Sahli does not agree with Roux that the cases described by him as suppurative appendicitis should always be operated upon, for such cases frequently recover without surgical interference. He says that it has by no means been proved that the mortality is diminished by operating on all these cases without discrimination.—*Correspondenzblatt für Schweizer Aerzte.*

Comparative Action of Antipyrine, Phenacetine, and Phenocoll.—From a series of experiments on dogs, Drs. Cerna and Carter have reached the following conclusions: 1. Antipyrine, phenacetine, and phenocoll, all fail to produce any effect on the heat functions of the normal animal. 2. Antipyrine produces a decided fall of temperature in the first hour after its administration in the fevered animal. This reduction is due to a great increase in heat production. 3. Phenacetine, both in septic and albumose fevers, produces a very slight fall of temperature during the first and second hours after its ingestion by the stomach, but the greatest reduction occurs the third hour after its ingestion. The fall of temperature results chiefly from the heat dissipation. The increase in dissipation is not as great as with antipyrine. Probably the delayed action of the drug depends on its insolubility. 4. Phenocoll causes in fever a very decided fall in temperature, which occurs the first hour after the administration of the drug by the stomach. This reduction is the result of an enormous diminution of heat production, without any alteration of heat dissipation. Their experiments with antipyrine are in accord with the results obtained by Martin.[1] Wood, Reichert, and Hare,[2] together with Destrée,[3] have reached the conclusion that antipyrine reduces the temperature by a decrease in heat production, and that heat dissipation also falls with the production. In their experiments with antipyrine the composite curve shows the rise of heat dissipation. The authors believe, therefore, that this phenomenon is effected through a *thermotaxic* rather than through a *thermogenic* mechanism. They further believe that phenacetine and phenocoll reduce the temperature by a decrease in the heat production through their action on a *thermogenic* nervous centre. The fact that all drugs here studied fail to produce any effect on the normal heat function, proves that they affect these functions through the nervous system. Probably the fact pointed out by Hare,[4] that many investigators do not take into account other circumstances, such as tying animals down, and confinement in a box, may explain many of the results obtained by some observers in the normal animal.

Diagnosis of Biliary Lithiasis.—The *Gazette Médicale de Montréal* for July, 1892, quoting from a French journal, calls attention to the difficulty of diagnosticating the fruste forms of biliary lithiasis, in which classic hepatic colic is replaced by cramps in the stomach, by twinges of pain, by various aches, or by a tendency to drowsiness. Yet special characteristics exist that distinguish the condition from one of simple dyspepsia, even without classic symptoms. There is no vomiting, no collection of mucus, no eructation. Pain is the predominating symptom. This pain is irrespective of the quality or quantity of food taken. It comes on about two hours after eating. These three points are distinctly characteristic of biliary lithiasis. In more severe cases, the intensity and the persistence of pain render the diagnosis difficult. Headache may take the place of colic and remain the only distinct characteristic of biliary lithiasis. Neurotic phenomena may also be its only manifestations, the character then undergoing definite change, but colic and headache never appearing. Profound melancholy comes on, so

[1] Therapeutic Gazette, 1887.
[2] Therapeutic Gazette, vol. ii., p. 803.
[3] Jour. de Médecine de Bruxelles, July 20, 1888.
[4] Fever: Its Pathology and Treatment, Boylston Prize Essay, 1890.

persistent as to suggest the advisability of asylum treatment. There is some truth, it will be perceived, in the definition given by the ancients to the term hypochondriasis. Again, biliary lithiasis may give a complete clinical picture of chlorosis that is of long duration and that resists treatment.

The Varieties of Vertigo.—Dr. Miles, in the *Philadelphia Polyclinic*, speaks of five kinds of vertigo. 1. Vertigo dependent upon intracranial disease, chiefly tumor and pachymeningitis, but not including under this general head the disturbances of equilibrium arising from disease of the cerebellum or corpora quadrigemina. The three most frequent general symptoms of intracranial tumor are headache, nausea or vomiting, and vertigo; and these are commonly dependent upon the same mechanism. Most cases of brain tumor originate in the membranes of this viscus; the trigeminal nerve has a wide distribution in the dura, and intense localized irritation of its branches gives rise directly to pain and indirectly to nausea, vomiting, and vertigo. The deep nucleus of this nerve is closely related in position to the nuclei both of the pneumogastric and the auditory nerves, and the reflection or irradiation of powerful impressions from the former to the latter will cause vomiting and vertigo. 2. Ocular vertigo, which may spring from several conditions, but is most commonly due to serious disorders of refraction, to paresis or spasm of the ocular muscles, or to excessive retinal irritation. In any case the cause of which is obscure, the eye should be carefully considered and its defects corrected. Partial tenotomies and exact corrections or re-corrections with glasses have been found efficient, particularly in some of the milder but none the less annoying vertigoes. 3. Vertigo due to disease of blood-vessels, as anterior sclerosis, from alcohol, syphilis, gout, old age, etc. The diagnosis of these cases is to be made by excluding carefully ear, brain, eye, severe local disease anywhere, toxæmias, etc., but chiefly by a careful examination for arterial or arterio-capillary fibrosis and the accompanying conditions of the heart, kidneys, liver, and other organs. Reedy, resisting arteries, excessive arcus senilis, changes in the pulse-rate, reduplicated or clanging cardiac sounds, and other well-known phenomena, will be present. 4. Vertigo which has its source in the state of the blood, under which general head are included those forms of the affection arising from anæmia or hyperæmia, lithæmia, and a large variety of toxæmias, and from the direct action of drugs and poisons. 5. Vertigo dependent upon intense irritation reflected to the labyrinth or brain from more or less distant regions of the body—commonly classed as nasal, pharyngeal, laryngeal, gastric, intestinal, hepatic, uterine, ovarian, etc. The reflex origin of these vertigoes is often doubtful; they are more probably due to a toxic state of the blood, which is produced in various ways.

Adenoma of the Soft Palate.—At a recent meeting of the London Pathological Society (*The Lancet*) Mr. Morton showed a tumor removed by Mr. Harsant from the soft palate of a lady fifty-two years of age. It was noticed accidentally on examination of the throat. It was distinctly encapsuled and easily shelled out. The enucleated growth was round, the size of a walnut, not lobulated, but slightly irregular on the surface, and of homogeneous appearance. It grew, as most palate tumors did, on the left side. Microscopic examination showed it to consist of somewhat large cells, arranged in some areas in irregular branching columns, among fine, well-formed connective tissue. In one area there were well-formed gland acini in large numbers, and yet close by the same kind of cells that formed the gland tissue became oval and spindle in form like embryonic connective tissue. This Mr. Morton considered evidence of the embryonic origin of the tumor, and that very early in fœtal development, and pointed to the analogy of the structure of the tumor to the complex nature of the ordinary parotid tumor, which was also probably of embryonic origin. He called the tumor "adenoma" simply to classify it with these palate complex tumors, which were all innocent growths, and had been very fully described under that name by Mr. Stephen Paget in "St. Bartholomew's Hospital Reports." He wished to call attention to the similarity between the branching columns of cells in his tumor and those described by Mr. Shattock in Sir William MacCormac's case, recorded in vol. xxxvii. of the "Transactions," and Mr. Stephen Paget's in vol. xxxviii. Mr. Morton thought it was not a generally recognized fact that large innocent tumors might develop in the soft palate, and at the same time project externally under the angle of the jaw. Out of the thirty-one cases of adenoma of the palate collected by Mr. Stephen Paget, not one projected externally, though two were so large as to be difficult of removal through the mouth.

Intermitting Fever and Gall-stones.—It is a fact long known, and mentioned both by Budd and Frerichs, that cases of gall-stones occur accompanied in their course by febrile attacks much resembling malaria. Budd and Frerichs looked upon these attacks as analogous to catheter fever, while Charcot thinks they are connected with sepsis. D. Schmidt agrees with Budd and Frerichs, and has observed in the course of these cases two constant symptoms that render the diagnosis easier. These are a tympanites that constantly precedes an attack of colic, and a soporific state that always follows, and that may last six, eight, twelve, or twenty-four hours. If these attacks of intermitting fever come on in a case in which gall-stones are known to be present, with or without jaundice, there can be no difficulty about the diagnosis. If no gall-stones have been observed, however, if colic is not present, and there is nothing but jaundice, or even if this be absent, the writer looks upon gall-stones as probable under the following conditions: If before the febrile attack the tympanites alluded to is remarked objectively and subjectively, and if the soporific condition follows the fever. Otherwise the condition might be mistaken for true intermittent, for pyæmia, for suppuration and ulcerous inflammation of the gall-passages, for suppurative pylephlebitis, for acute suppurative hepatitis, and acute atrophy of the liver, as in all these diseases an intermitting fever with rigors is regularly or irregularly present. The presence of a wound removes all doubt as to pyæmia, while ulcerative and suppurative affections of the gall-passages are difficult to diagnose. If the patient lives in a malarial district and the case behaves like one of malaria, the diagnosis is clear. The writer does not look upon the prognosis in such cases of fever as unfavorable. The treatment is that of gall-stones. If the gall-stones are removed and do not return, the fever also will cease and will not return.—*Medical Press.*

Treatment of Seborrhœa of the Scalp.—In cases of seborrhœa of the hairy scalp, with a tendency to alopecia, the following method is advocated: At night scrub the roots of the hair energetically with an alkaline solution of green soap, and pour on a little tepid water to cause the soap to foam. Leave this foam on the scalp for a few minutes. Remove with tepid water and apply the following salve:

℞. Flowers of sulphur..... grs. xlv.–℥ jss.
Lanoline..... grs. xlv.
Benzoated lard..... ℥ j.

This salve prevents the formation of crusts in excess. If the patient suffers from pruritus, add 5 to 8 grains of salicylic acid, previously dissolved in alcohol. Wash the hair and apply the salve, at first every day, and later every eight to fifteen days.—*La Riforma medica.*

Consumption of Alcohol in France.—In 1870, 585,000 hectolitres of alcohol were consumed in France, an average of about one litre and a half per head. In 1890, 1,669,184 hectolitres were consumed, an average of nearly four and one-half litres per head.

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MEDICINE AS A CAREER.

IT is well for the carping critics and chronic fault-finders to receive an occasional admonition. The genial glow of sincere optimism pervading an article by Dr. J. S. Billings in *The Forum* should go far in the direction of silencing medical grumblers. We are told at the outset of the learned doctor's communication that, to the young man about to choose a professional career, medicine at this time offers opportunities for the employment of the highest mental faculties, for the increase of knowledge, for usefulness to the world, and for the attainment of true happiness, such as no other profession presents. It is not meant by this to assert that it will certainly secure to its followers all, or indeed any, of these things, but that, given the same degree of intellect with a good preliminary education, the probabilities are that out of a thousand men taking up the study of medicine more will attain success than will do so among a similar number of young men of like character and attainments who devote themselves to theology, law, politics, or education. "Success" is defined by Dr. Billings to mean a career in which the man has done good work, the best of which he was capable, work in which he was strongly interested and which in itself gave him pleasure, work done unselfishly because he believed it to be good work which ought to be done, and not merely performed as a means grudgingly made use of to obtain wealth or fame or power as the real objects sought. It is a career which has secured a happy home and sufficient means to support it, although it may not have led to wealth; it has brought to its pursuer the approval and friendship of those best acquainted with his life and work, although it may not have made him famous or given him decorations or formal honors: it has made his advice valued and sought for by those who know him, although it may not have given him an executive office or made him a ruler over his fellow-men. Such a career does not protect from the afflictions and sorrows common to humanity, but it does away in a great measure with boredom and ennui, with weary waiting for something to turn up, and the work itself is the best resource against inevitable grief. The man who achieves such a career has not been dependent on his acquaintances for his happiness, he has not fretted and worried because his family or his friends or his associates or the state have not recognized his merit according to his conception of it, for he has acted on the principle that he exists for their benefit, and that they are not merely his appendages.

This is a pleasing picture. Indeed, we cannot avoid a lurking suspicion that it is almost too pleasing to be applicable to the large army of professional men who assert that they are compelled to "fight for a living." True, "existing for the benefit of others" is the privilege freely granted to many doctors, but it is not a privilege that in many concrete instances was the primary inducement to choosing medicine as a career. Nor do we believe that many men are to-day practising medicine in order to do away with boredom. Perhaps there are wealthy gentlemen who take up medicine as they would any other ennui-dispelling fad. But we strongly surmise that the great majority of the youths of this and other countries engage in the study of medicine with a view to an honorable livelihood. In other words, we believe it is oftener the provision of bread and butter than visionary allurements of abstract beatitudes which induces men to become doctors of medicine.

Dr. Billings says that no other profession affords such opportunities for investigation and experiment, or a greater field of usefulness. Of all men the skilled physician stands nearest to the veil of Isis, which is becoming thinner, though it may never be lifted. The physician must be a student so long as he lives; as yet there is no visible end of the things which he does not know and ought to know, and has reason to think that he might know by the expenditure of a little time and effort. Here again the author is probably right. Yet we submit that only a small minority of actual practitioners are deeply impressed with their proximity to the veil of Isis. There are too many problems of a very un-Isis-like character pressing for solution in the daily life of the physician to render the pastime of veil-lifting a feasible one for him. The scientific laboratory is the place where Isis may be unblushingly approached.

Dr. Billings allows that the tastes of some incline not so much to actual experiment as to the collation and comparison of the results of the experiments of others. In this, also, medicine presents at the present time peculiar attractions. Its current literature is of vast extent, and while much of this literature is worthless, much of it is suggestive, and perhaps one per cent. of it is of permanent value. Now, it is this very fact, that it requires search and discrimination to find what is useful, that is attractive to certain minds. On this last point we beg to differ from the author. In examining the literature of a given subject nothing is quite so discouraging and exasperating as the laborious process of separating grain from chaff, the very thing which Dr. Billings would have us believe is "attractive."

Coming down to practicalities, we are informed that "in some matters the wife trusts the medical man more than she does her husband, the youth comes to him in trouble concealed from his parents, and the man of business confides in him as he does not in his partner. The skilled physician becomes not only the trusted adviser in disease, but the personal friend, the one who is appealed to for sympathy in joy as well as in trouble, whose company is sought upon all occasions, whose mere personal presence brings with it assurance and comfort." This certainly reads well. Nevertheless, in actual life, the

idyllic state of affairs thus pictured is at times disturbed by the clumsy intrusion of the doctor's bill, the dismissal of one medical attendant for another, the institution of a malpractice suit on the flimsiest pretext, or even the request for a "night-call," when a day-call would have sufficed.

In regard to what the author demands of the future physician, he is compelled to admit that not more than one man in a thousand can properly comply with the requirements. Evidently medicine must not be studied by poor men's sons. But the man who has the means which will enable him to spend the time required to fit him to take charge of the health and lives of his fellow-men had better so invest them; while he who has not such means should carefully consider as to whether he had better not abandon all thought of studying medicine and try some of the numerous other occupations which offer a better investment for his time and money, and in which he may be a less dangerous and more useful member of society. This country is in no need of men possessing the diploma of Doctor of Medicine; it already has at least twenty thousand more of them than it requires or can properly support; but it does need several hundred, say a thousand, more of properly-trained physicians. Dr. Billings's young man spends three or four years at the university, four years at the medical school, one and one-half year in the hospital, and two years in travel and special studies. When, therefore, he is ready to begin work he will be about twenty-eight years old, and his education, living, books, etc., will have cost about eight thousand dollars from the time he entered the university. Again we suspect that this paragon will remain a *rara avis* in our country, so long as two-term courses annually yield such a bountiful harvest of "qualified doctors."

In conclusion the author tells us that he is not considering medicine as a trade, or looking at it from the commercial point of view. He has not presented among its attractions the probabilities of being able to have a villa at Newport or to keep a yacht or fast horses, but has claimed that it will provide means to secure a comfortable and happy home, and to aid in some degree those who are less fortunate. The physician whom he has in mind cannot afford to waste his time in making more money than is required for his own immediate needs and for those of his family. As one who has had special advantages in culture and in the acquisition of knowledge, he is subject to special claims on the part of his fellow-men who have not been granted such opportunity. The torch of science is placed in his hands, not merely to illuminate his own path, but to enable him to guide and help others in their passage over Mirza's bridge, out of the darkness into the darkness; and, moreover, it is his duty to hand it on to his successors with added fuel, that it may be more bright for them than it has been for himself. To all of which we devoutly whisper our Amen!

A Uniform Temperature Scale.—The Prussian government has decided to make the use of the Centigrade thermometer general throughout Prussia, where the Reaumur scale is still employed in some places. No further Reaumur thermometers are to be issued to public officials.

ARE WE ON THE WRONG TRACK?

In the constant search for more exact and scientific methods which characterizes contemporaneous thought in medicine is there not some danger that, with increasing knowledge of disease, we may be losing sight of the patient and his personal sufferings? In Germany, for example, the home of advanced scientific medicine, the patient is too often regarded, especially by the recent graduate, as the incidental appendage to a more or less interesting morbid process. We are not yet Germanized to this extent. For in our country it has ever been the boast of the medical profession that a practical spirit ruled its methods. This has earned us many a transatlantic sneer at our lack of scientific spirit. Nevertheless, it is pretty well understood nowadays that American physicians are excelled by those of no other country in the practical management of disease, even if it is conceded that some Europeans have attained a higher degree of perfection as regards certain refinements of diagnosis.

We have always maintained that clinical experience and "bedside" indications, as supplied by suffering humanity, cannot be entirely supplanted by laboratory research. But in Germany the laboratory rules the day.

It is interesting to observe that occasionally, even in the land of the Teuton, a voice will be raised against this ultra-physical tendency of medicine. That they are on the wrong track in regard to the treatment of sick persons over there, is, for example, boldly asserted by Professor O. Rosenbach, of Breslau.[1] He says that the practitioner has had to take a "back seat," while the test-tube, the microscopical slide, and other instruments of precision, often wielded by mere theorists, are usurping his powers and functions.

The tuberculin fiasco is too fresh in the memory of all of us to need more than a mention here. Rosenbach says that it is absurd to treat phthisical patients as if their bacillary expectorations were all there was to the disease. He probably goes too far when he intimates that the presence or absence of bacilli in the sputum is of no practical significance. But it is quite true that treatment has not had much help from the bacillus tuberculosis. Any schoolboy can stain and gloat over a few bacilli. Nevertheless it still taxes to the utmost the skill of an experienced doctor to secure a prolongation of life and comfort for the phthisical patient.

Again, with regard to cholera, it is senseless to base a diagnosis solely on the presence of the comma bacillus, and to be thus compelled to await the results of bacteriological tests before knowing what to do. Yet, during the recent German invasion it has frequently happened that patients were dead for a day or two before the practitioner was permitted, by grace of the authorized State bacteriologists, to "know" that the disease was true cholera. Moreover, the extraordinary fatality of cholera nostras is very suggestive of the possible fallibility of laboratory diagnosis, which disregards all clinical evidence.

Dr. Rosenbach deplores this tendency to exalt the chemist or bacteriologist above his deserts. He should be merely an assistant of the true physician. Rosenbach

[1] Der Kommabacillus, die Medicinische Wissenschaft und der ärztliche Stand, Münchener Medicinische Wochenschrift, No. 43, 1892.

is strongly opposed to what he terms the diagnosis *in absentia*—that is to say an "exact diagnosis" based exclusively on the results of the chemical or microscopical examination, for example, of the urine, the patient being quite unknown to the diagnostician.

Prognosis and treatment based on such one-sided evidence are very apt to be faulty. Yet this method is much in vogue in Germany. The same objection applies to the practice of establishing the prognosis and treatment of tumors on what the microscope reveals in connection with a minute particle of the growth.

Modern medical science is fast approaching the final goal when the patient will be altogether a *quantité négligeable*, says Rosenbach. It is certainly dangerous to consider the human being merely in the light of an inanimate culture-medium for bacterial growth, or as supplying interesting secretions and other specimens.

But whatever they may do in Germany, there is not much danger that laboratories will supplant physicians in this country in the near future. Nor do we apprehend that Rosenbach's fears will soon be realized to the extent of making the German doctor altogether superfluous, even if diagnostic institutes, supervised by State officials, will be called upon to decide most medical questions.

It is true, in Germany "bureaucracy" has become almost unbearable in arrogance. And we sympathize with the profession, whose standard is evidently being made lower by certain abuses of power on the part of sanitary and other officials. But we cannot take so hopeless a view of the situation as the learned professor of Breslau. The common sense of the people themselves will prevail and restore the now shaken confidence in the utility of the general practitioner of medicine. Perhaps we have all been, more or less, on the wrong track. But it is not too late to turn back. Let us award to faithful clinical observation of the patient that share in diagnosis and rational treatment which, so long as medicine remains an art, can never safely be taken from it. When civilized man is sick he craves human sympathy and succor. It is the privilege of our calling to extend this, even after a scientific laboratory diagnosis, with brutal frankness, has proclaimed the hopeless nature of a given case. Medical laboratories are still needed all over this country, and so are medical men. There is room for both. Neither can prosper at the expense of the other.

A BLOW AT PATENT MEDICINE VENDORS.

A DECISION has recently been rendered in the English courts which will carry dismay to the hearts of all patent medicine vendors who make great promises of cure. It has been decided that such persons can be compelled to fulfil their claims or pay. The test case was this: One year ago, when the influenza was prevalent, the Carbolic Smoke Ball Company, in an advertisement, guaranteed immunity from the disease to everybody who used the remedy three times daily for two weeks, £100 to be the forfeit. Mrs. Carlill used the smoke ball faithfully for three weeks, and then the epidemic seized her. She sent in her claim for £100, but the money wasn't paid. All sorts of excuses were offered. It was argued that the offer was a mere device to attract attention, a wager vague in its terms: that there was not a complete contract, because Mrs. Carlill did not notify the company of her acceptance of the offer. All these excuses have been brushed aside by the courts, and the company has been compelled to pay.

A casual examination of the columns of the daily press will show that it contains a very considerable number of promises to cure or refund the money. If English law should furnish any precedent for American cases, the patent medicine man will have to be extremely cautious in the way his advertisement is worded. Advertising quacks who charge a patient a large sum under promise of cure or return of money would not be able to get off under the English interpretation of the law. An illustration of this has already been furnished in this State. A certain doctor who advertises to cure "all skin diseases" failed to cure a woman, who thereupon had him arrested for obtaining money under false pretences. He returned the money, whereupon the case was dropped.

THE PATHOLOGY OF THE BLOOD.

THE subject of the anatomy and pathology of the blood has made very great advances in the last ten years. It has been shown that the corpuscular constituents of the blood cannot be divided simply into the white and the red. The leucocytes, for example, are known to be of four kinds: the lymphocyte proper, with a very large nucleus, the mononuclear, the polynuclear, and transitional forms. Another classification, which we shall refer to later, has been proposed also, based upon the reaction of the cells to staining agents.

The red blood-elements are now classified as red cells, blood placques, and blood granules, or macrocytes, microcytes, and poikilocytes.

Remarkable variations in the density and corpuscular richness of the blood have also been noted. By means of new instruments of precision, and new methods of fixing and staining the blood-elements, facts of great importance are being gradually obtained; and it will not be long before an examination of the blood will add greatly to our means of diagnosis, and will become a necessary part of the routine work of the careful clinician.

Excellent work in the study of the pathology of the blood has been done by several physicians in this country, and recently papers upon the subject have appeared in the *University Medical Magazine*, by Drs. Frederick P. Henry and Alfred Stengel.

Dr. Henry limits his remarks to the anatomy of the primary anæmias. These he classes as chlorosis, pernicious anæmia, leucocythæmia, lymphatic anæmia, or Hodgkin's disease, and splenic anæmia.

With regard to the first disease, he states that the red blood-cells (1) may be of normal size and number, their only change being a deficiency of coloring matter; (2) they may be diminished in size and normal in number and in percentage of coloring matter; (3) they may be diminished in number with diminished, normal, or perhaps increased, percentage of hæmoglobin.

The essential fact is that the percentage of hæmoglobin is reduced in this affection. But since a similar reduction occurs in other diseases, it cannot be called characteristic of the disease. In other words, chlorosis, so far as is yet known, has no anatomical basis.

In pernicious anæmia the blood changes are very great. First, the quantity is greatly diminished, next, the number of red blood-cells is extraordinarily reduced, there being often only about 500,000 to the cubic millimetre, this being about one-tenth of the normal. Besides this, the red cells are often enlarged and undergo changes in shape. The other anatomical changes are secondary, and consist of fatty degeneration, hemorrhage, and pigmentation. It seems to be pretty well established that the loss of the red cells occurs chiefly in the liver, where they are destroyed by a cadaveric poison which is carried to that organ from the intestines and stomach. Dr. Henry thinks that there is also a defect in the production of the red blood-cells. Certain curious degenerations are known also to occur in the spinal cord.

In leucocythæmia, according to Dr. Henry, the blood change never exists independently, but is always associated with anatomical alterations of spleen, lymph-glands, or bone-marrow. Accordingly, three forms of leucocythæmia are commonly spoken of: a splenic, a lymphatic, and a myelogenic. The splenic form is, as its name implies, associated with disease of the spleen, and, according to some authorities, this is the only genuine form of leucocythæmia, the changes sometimes observed in lymph-glands and bone-marrow being, in their opinion, secondary to those of the blood.

In leucocythæmia there is increase of the blood-making tissues in the spleen, lymphatic glands, and bone-marrow. But the essential anatomical alteration is the increase in the number of white cells. The red may be reduced about fifty per cent. The volume of blood is, if anything, increased. The white cells undergo certain changes in accordance with their reaction to stains. These cells are classed as eosinophile, basophile, neutrophile, and amphophile.

In normal blood the great majority of the white cells are neutrophile, whereas in leucocythæmia the basophile and eosinophile cells are often very abundant. The leukæmic blood change is characterized not only by excess of elements normally existing in the blood, but by the appearance of a cell not seen under any other circumstances. This is the so-called myelocyte. It is as large as, or even larger than, the large lymphocytes of normal blood, and differs from the latter in that it contains a large number of neutrophilic protoplasmic granules. It is probably derived from the bone-marrow.

Peculiar octahedral crystals, the "Charcot-Leyden crystals," are also found. Splenic leukæmia is a very rare disease, characterized by the features of pernicious anæmia, plus a very much enlarged spleen. Not much is known of its true nature.

CLINICAL INSTRUCTION ON INSANITY.

It is strange, when one thinks of the great number of insane in the community, that so little attention is paid in medical schools to the teaching of its diagnosis and treatment. Over twenty years ago, at a meeting of the Association of Medical Superintendents of American Institutions for the Insane, held in Toronto, the necessity of instruction in disorders of the mind was insisted upon, and the medical schools were requested to institute courses of lectures, and to examine candidates for graduation, upon this most important branch. It was also urged that in connection with these lectures clinical instruction should also be given wherever practicable.

It is only within a comparatively recent period, however, that lectures on insanity have been systematically given in any of the medical schools, with very few exceptions, and even now clinical teaching is almost unknown, owing to the impossibility of procuring the necessary material outside of hospitals for the insane. Recognizing this difficulty, and with the desire of minimizing it as far as possible, the New York State Commission in Lunacy has recently passed a resolution recommending that "the boards of managers of the several State hospitals afford to medical colleges situated in their vicinity, as well as to practising physicians who may desire to avail themselves of the privilege, such facilities for the clinical study of mental diseases as in the judgment of the medical superintendent may be deemed wise and proper."

As it is only in public hospitals that the required material may be found, it is to be hoped that this recommendation will be favorably received by the managers of the various State institutions, and that thus the knowledge of mental diseases may become more diffused among the new generation of medical men than it has been hitherto. The family physician is usually the one first appealed to in cases of commencing insanity, and hence the importance of a general acquaintance with the early stages of insanity, when the chances of cure are greatest, can hardly be over-estimated.

THERE IS NO ALIMENTARY OXALURIA.

Our knowledge of the peculiar condition or symptom described as oxaluria, idiopathic oxaluria, or oxalic acid diathesis, is admittedly quite defective. Fürbringer, Cantoni, Beybie, and Jaksch, have tried to throw light on the matter, but their publications have not dispelled the uncertainty surrounding the subject.

Dr. Abeles has recently again studied oxaluria, chiefly from an experimental point of view. He first examined certain foods, in order to determine the precise amount of oxalates contained in them. He then analyzed the urine of healthy subjects, after ingestion of food containing an abundance of oxalates, and he finally conducted a series of investigations on dogs.

As a result of his researches, which are published in the *Wiener Klinische Wochenschrift*, Nos. 19 and 20, 1892, he announces that:

1. The daily excretion of oxalic acid varies in the healthy human being within the limits assigned by Fürbringer.

2. There is no alimentary oxaluria. That is to say, oxalic acid is not secreted by the kidneys in health, in consequence of the ingestion of food containing oxalates.

3. Oxalate of lime, being insoluble, has no practical significance for the human body when introduced along with food.

It is quite probable that the soluble oxalates are transformed into lime salts in the alimentary canal.

4. To occasion the morbid symptom of oxaluria, the ingestion of ordinary food containing oxalates is not sufficient.

5. Transitory oxaluria can be readily produced by the

subcutaneous use of small quantities of neutral oxalate of soda.

Dr. Abeles also found that the excretion of uric acid was in no way modified by the ingestion of food containing oxalates. The author draws the practical conclusion from his observations that patients with oxaluria need not have foods containing oxalates excluded from their dietary. The same applies to those with renal affections.

For those interested in the subject, it may be well to recall that Fürbringer places the amount of oxalic acid passed in twenty-four hours at about one-third of a grain. Also, that among the foods containing this substance, beets, asparagus, tomatoes, and fresh beans, occupy a prominent position.

THE USELESS WORK OF THE ACADEMY.

We published last week the memorial of the Academy of Medicine to Congress in favor of a National Quarantine. The memorial was duly presented to that body, but not until after the bill which has since passed had been agreed upon. While the action of the Academy was altogether commendable, the delay in taking that action rendered its effort useless. We have often expressed the regret that the Academy usually remained so indifferent to great public questions which fall within the scope of its legitimate work. It has a power for usefulness in the fields of social, sanitary, and political science, unequalled by any other body. It has the confidence of the community to such an extent, that it has but to express emphatically its conclusions to receive general support from all intelligent persons. In like manner, it can call into activity the entire profession of the country and concentrate its energies upon any reform. But to accomplish this object the Academy must be on the alert and take a more aggressive position. It should be prepared to take the lead, rather than follow in the wake, of public opinion, as in this instance.

CLIQUISM AND THE STATE SOCIETY.

A matter worthy of attention in the proceedings of the Medical Society of the State of New York, was a proposal to alter the by-laws so that it may be legal to nominate the chief officers in open session. There is abundance of time to think the matter over before action at the next annual meeting. The measure will doubtless commend itself to every member outside of the old ring which has governed the Society for many years past. There has been more of petty politics in this organization than in any similar one in the country. Bargains have been made with the assumed leaders of the clique which would have disgraced a ward primary. This is done year after year, until even the majority of the conscientious workers in the Society have begun to believe that the clique owns the entire concern. Thus it happens that not infrequently, in farming out offices by districts, men attain the highest place who are not known outside of their counties, and whose only recommendation is an ability to work their constituents. The Society has been deterioriating for years in consequence. It may not be too late to thwart some of the schemes for next year; at least there is no harm in trying.

News of the Week.

Death of Dr. George H. Bennett.—Dr. George H. Bennett, of Lima, Livingston County, N. Y., one of the best known and oldest physicians of Western New York died on February 2d. Dr. Bennett was born at Avon, Livingston County, N. Y., June 9, 1820. Graduated at Buffalo in 1848, was in the army from 1864 to 1865—and continued in active practice until his death. He leaves, besides his wife and several daughters, four sons, three of whom are practicing physicians, and one now at the Medical Department, University of Vermont. He was in his seventy-third year.

Typhus Fever has developed in Brooklyn, a case having been discovered in an Italian tenement. In New York City two other new cases are reported daily, but the disease seems to be under control.

Examinations of Candidates for Medical Department, United States Army.—An Army Medical Board will be convened in New York City, on March 27th, for the examination of candidates. Applications to appear before the Board are required to be sent to the office of the Surgeon-General, U. S. A., Washington, before the fifteenth of that month. The first class to be examined will be required to be in readiness on Monday, April 3, 1893. Permission to appear before the Board is obtained by letter to the Secretary of War, which must be in the handwriting of the applicant, giving the date and place of his birth, and the place and State of which he is a permanent resident, and inclosing certificates based on personal acquaintance from at least two reputable persons as to citizenship, character, and habits. The candidate must be a citizen of the United States, between twenty-two and twenty-eight years old, of sound health and good character, and a graduate of some regular medical college, in evidence of which his diploma will be submitted to the board. The scope of the examination will include the morals, habits, physical and mental qualifications of each candidate, and his general aptitude for service; and the board will report unfavorably should it have a reasonable doubt of his efficiency in any of these particulars. The physical examination comes first in order, and must be thorough. Each candidate will, in addition, be required to certify "that he labors under no mental or physical infirmity or disability of any kind which can in any way interfere with the most efficient discharge of any duty which may be required." Errors of refraction, when not excessive, and not accompanied by ocular disease, and when correctable by appropriate glasses, are not causes for rejection. The mental examinations are conducted by both written and oral questions, to which written and oral answers are required upon—

I. Elementary branches of common school education, including English grammar, arithmetic, the history and geography of the United States, natural philosophy, the principles of Latin grammar, and upon general literature, and ancient and modern history. Candidates claiming especial knowledge of the higher mathematics, ancient or modern languages, drawing, analytical chemistry, or other branches of natural science, will be examined in those matters as accomplishments and will receive due credit therefor, according to their proficiency.

II. Professional branches, including anatomy, physiology, chemistry, hygiene, pathology, and bacteriology, therapeutics and materia medica, surgery, practice of medicine, obstetrics, and the diseases of women and children.

Examinations at the bedside will also be conducted in clinical medicine and surgery, and operations and demonstrations upon the cadaver. Hospital training and practical experience in the practice of medicine, surgery, and obstetrics are of great importance to candidates seeking admission to the Medical Corps of the Army, and they will be fully appreciated and duly credited to those who have had such advantages. The board has discretion to deviate in such manner as it deems best from this general plan of examination when necessary for the interests of the service. The merits of the candidates in each of the several branches, and also their relative merit as evinced by the results obtained from the entire examination, will be reported by the board, and in accordance with this report approved candidates will be appointed to existing vacancies, or to such as may occur within two years thereafter. An applicant failing in one examination may be allowed a second after one year, but not a third. No concession will be made for the expenses of persons undergoing examination, but those who receive appointments will be entitled to travel allowances in obeying the first order assigning them to duty. There are at present ten vacancies in the corps to be filled.

Russian Confirmation of the Cholera "Water Theory."—The Cholera Conference in St. Petersburg, as might have been expected from the conventional lines on which it was conducted and the affectation of official secrecy with which it was surrounded, has, says the *Manchester Guardian*, not been very fruitful in new information. One main and important conclusion was, however, arrived at. This was that (like the great epidemics of cholera in this country studied by Snow and Simon, and the East London epidemic of 1866) the "pollution of the drinking-water was in almost every case the channel by which the disease was spread." The cholera was shown to have followed the lines of human travel, and to have spread along the course of the rivers, affecting the systems of the Volga, the Don, the Dnieper, etc. This furnishes for the first time the full confirmation from Asiatic sources of the English "water theory" of cholera, the application of which has been so fruitful in life-saving, and in the prevention of the spread of cholera. Steps are being taken to bring these conclusions to the notice of the Government.—*British Medical Journal.*

Controlling the Sex.—A solution of this problem is confidently given in the Chicago *Medical Times* by a Mrs. A. M. Jess, who writes as follows: "The December number of the *Times* is at hand, and among its contents I see an article on the procreation of sexes, which, according to my individual experience, is not true. I am the mother of ten children. Among them I have two sons and one daughter of whom I knew when conception took place. For my sons, it took place just when the menses should have appeared, and for the daughter, it was fourteen days after the menses had ceased. The daughter was born nine months and two days from that time, and the first son was born nine months and three days from the time of conception. The last child being a boy, and myself being more advanced in years, my child was born nine months and eight days from the time of conception. If parents wish to produce different sexes the connubial embrace should take place just before the menstrual epoch for male, and afterward for female, children. The production of males or females, I am inclined to think, lies with the mother, she being stronger before than afterward. The desire for sexual intercourse being stronger before the menses take place, and being weaker afterward, explains the difference in the sexes. You may publish my letter if you wish, as I would like to hear from the fraternity on the subject."

Small-pox on the Pacific Coast.—Small-pox continues to cause much anxiety all over the northern part of this coast. Every day or two a despatch announces its appearance in some new place in Oregon and Washington. All traffic is stopped this week on the Snohomish River above Everett, nearly one hundred cases having been reported from different places along the river, and the disease appears to be steadily extending southward. The steamer Umatilla, which was noted at Port Townsend as having variola on board, was promptly ordered into quarantine on arrival at San Francisco, and her crew and passengers are still isolated at Angel Island, but there has been no further outbreak among them. In this city two new cases have developed during the last ten days, and both have proved "white elephants" to the health officials.—San Francisco Cor. *Medical Review.*

Almost a Duel over the Posterior Spinal Roots.—MM. Marie and Déjerine, two eminent neurologists of Paris, came very near to entering upon mortal combat over a question of the nature of tabes dorsalis. M. Marie had accused M. Déjerine of appropriating a theory published by Professor Leyden in 1863, and subsequently in 1889, according to which the lesion in tabes is a prolongation into the posterior cords of lesion present in the corresponding roots, also of having contradicted himself in 1890 by saying at one time that tabes is of parenchymatous, at another that it is of intestinal, origin. M. Déjerine denied this, and authorized Dr. E. Gley and Dr. M. Letulle to demand that certain passages in the said article, which seemed to throw doubt on his scientific honesty, should be withdrawn; if not, a challenge was to be delivered to M. Marie. The matter has been compromised.

Removal of the Gasserian Ganglion.—The *Riforma Medica* states that on December 19th Professor D'Antona performed intra-cranial resection of the second and third divisions of the trigeminal nerve, and extirpated the corresponding part of the Gasserian ganglion. The patient was a woman who suffered from tic douloureux, with convulsive movements of the hand and tongue. The operation was performed in the Ospedale di Gesù e Maria of Naples, by a modification of Mr. Rose's operation as described in our own columns. The convulsive seizures, which had numbered one hundred a day, ceased immediately after the operation, and on the eleventh day the patient was making rapid progress toward complete cure.

The French Society of Electropathy will hold its annual exhibition on Friday and Saturday, April 7 and 8, 1893, in the "Laboratoire de Physique de la Faculté de

Médecine" in Paris. There will be exhibited the instruments employed in electropathy, as well as demonstrations concerning electric methods, drawings, etc. The Committee on Organization is represented by Professor Gariel, Drs. Tripier, Gautier, Vogt, and M. Gaiffe, constructor. Physicians and intending exhibitors may communicate with Dr. Vogt, 28, rue Saint-Lazare, Paris, for information.

The Missouri Valley Medical Society will hold its next meeting in St. Joseph, Mo., on March 16th. Intending contributors are requested to send the titles of their papers to Dr. F. S. Thomas, Council Bluffs, Ia.

Dr. Robert F. Weir has been elected corresponding foreign member of the Society of Surgery of Paris.

The New York Health Department has established another temporary hospital for infectious disease in connection with the Willard Parker Hospital.

New York has twenty-five hundred square feet for sanitation, and twenty-five hundred for charities and correction, assigned to it at the World's Fair.

Professor von Esmarch.—On January 9th Professor Friedrich von Esmarch, the eminent surgeon of Kiel, celebrated the completion of his seventieth year. He was born at Tönning, in the Eiderstadt District, his father being a medical practitioner. In 1849 he qualified as a Privat-Docent, and in 1857 he was appointed Professor of Surgery in the University of Kiel. During his occupation of that charge he performed no fewer than fourteen thousand surgical operations. Besides his labors as a teacher and his professional work as a consulting surgeon, Professor von Esmarch has had a large experience in military surgery in the two Schleswig-Holstein campaigns in 1848 and 1864, the Austro-Prussian war of 1866, and the Franco-German war of 1870. In addition to all this active work, Professor von Esmarch has found time to make many and valuable contributions to surgical literature. In 1872 he married *en secondes noces* Princess Henrietta von Schleswig-Holstein-Sonderburg-Augustenburg, an aunt of the present German emperor; and in 1888 he received a patent of hereditary nobility. The orders and distinctions conferred on him in the course of his long and distinguished career are so numerous, that when he dons his uniform as a Surgeon-General, there is, as the author of a sympathetic puts it in the *Münchener medicinische Wochenschrift*, "hardly a spot on his breast that is not covered with high and highest orders and decorations."

Wooden Tongue-depressors are now being manufactured in Hamburg at a very cheap price. Such an one is used but once on a patient, thus insuring asepsis.

Dr. Louis Prevot, a French savant, is studying the language of chickens, and proposes to give the results of his study to the Academy of Sciences.

A Cholera Congress at Hamburg.—A congress, attended by thirty-two delegates from the chambers of commerce and commercial corporations of the seaports of the German Empire, was held at Hamburg recently, for the purpose of considering the measures advisable in regard to the sanitary control of home and foreign vessels visiting German ports. The motion put forward by the Hamburg delegates, namely, the adoption of rules analogous to those now enforced in the United Kingdom, which are admitted to have proved in every respect efficient without causing unnecessary interference with marine intercourse—was not accepted in its entirety. An international agreement was not considered to be as yet desirable. The resolutions formulated will be revised by the delegates of Hamburg, Stettin, and Dantzic, for immediate submission to the Imperial Chancellor for eventual embodiment in the forthcoming Imperial law regarding epidemics.

Death of Professor Hardy, of Paris.—We regret to announce the death of Dr. Alfred Hardy, the eminent dermatologist and Professor of Clinical Medicine in the Paris Medical Faculty. Professor Hardy was born in 1811, and was elected a member of the Académie de Médecine in 1867. He was the author of several important works, and in September last took an active part in the Congress of Dermatology at Vienna.

An Anti-Hoop-skirt Bill has been presented to the Minnesota Legislature. The medical profession has also been interviewed on the subject of crinoline, but without any very productive results. It is suggested that hoops take some of the weight off the hips and promote the freer circulation of air. They also make fat ladies more symmetrical, thus tending to lessen the practice of tight lacing.

The Nursery and Child's Hospital has netted the handsome sum of $11,500 by the annual charity ball given for it in January.

James Henry Wheeler, M.D., of Dover, N. H., died January 26, 1893, aged sixty-one years. He was graduated from the College of Physicians and Surgeons, New York, in 1862, receiving the first prize for his graduating thesis, and immediately settled in practice in Dover, N. H., his native city. He was a member and ex-president of the Strafford District (N. H.) Medical Society, a Fellow, and, at his death, president of the New Hampshire Medical Society, and a member of the American Medical Association. He was delegate from the New Hampshire Medical Society, in 1871, to examine the graduating class of Dartmouth Medical College, and to deliver the address to the same. He held an appointment as United States Pension Surgeon, for many years.

Dr. Wheeler was well read and well disciplined in his profession, and kept himself well informed in all that was new or progressive, and never failed to afford to his patients all the aids, helps, and alleviations that the profession could offer, in every emergency to which he was called. He was particularly earnest and sincere in all his religious relations, and was one of the pillars of the church to which he belonged, and devoutly and reverently officiated many years as one of its officers.

He married Miss Anna D. French, of New York, who with two children, survives him.

Archivio Italiano di Otologia, Rinologia e Laringologia is the name of a new journal devoted to diseases of the throat, nose, and ears. It is published in Turin, under the editorial management of Drs. G. Gradenigo, of Turin, and E. De Rossi, of Rome, assisted by numerous collaborators in other Italian cities.

Reviews and Notices of Books.

A Manual of Medical Jurisprudence. By Alfred Swanie Taylor, M.D., F.R.S. Eleventh American Edition. Edited by Clark Bell, Esq., President of the American International Medico-legal Congress of 1893, etc. 8vo, pp. 790. Philadelphia: Lea Brothers & Co. 1892.

This volume is prepared from the twelfth English edition, and is enriched by numerous citations and additions by the editor. His work is admirably done, judiciously condensed, well apportioned, eminently practical, and especially adapted to American medical jurisprudence. He has retained everything that is useful and important in previous editions, and has in many respects improved a work which has always been a standard one.

Transactions of the American Surgical Association, Vol. X. 8vo, pp. 280.

This annual volume is particularly interesting in connection with papers on the treatment of fractures of the lower end of the humerus and base of radius, and in the surgery of the tongue, with discussions on the same. Accompanying the volume is the representation of the historical ether sponge at the Massachusetts General Hospital.

Hygiene and Public Health. By L. C. Parkes, M.D. Third Edition, with Illustrations. Philadelphia: P. Blakiston, Son & Co. 1892.

This new edition of Dr. Parkes's well-known treatise has been enlarged by the addition of a few subjects, such as "Smoke Prevention," "Cyclonic Systems," and "Epidemic Influenza." Those interested in matters of hygiene will find this elementary work of considerable service, in giving them a fair knowledge of essentials. It is a practical *exposé* of modern views on this important branch of medical science.

Beitrag zur Klinik der Aktinomykose. Von Dr. Alberto Illich, Operateur an der I. Chirurg. Klinik des Hofrathes, Professor Dr. Albert, in Wien. Mit Zwei Lichtdrucktafeln. Wien: Joseph Safár. 1892.

In view of the fact that actinomycosis in man is being met with more and more frequently, whether because it is growing actually more common, or because it is now better known and more easily recognized, we need not stop to discuss, the publication of this excellent monograph by Dr. Illich must be regarded as most timely. The author has made a very exhaustive research through the literature of this subject, and has collected the histories of 421 cases, 54 of which were observed in Albert's clinic at Vienna. Of these 421 cases there were 218 of the head and neck, 16 of the tongue, 58 of the lungs, 89 of the abdomen, and 11 of the skin. The work is purely clinical in character, the greater part being devoted to a description of individual cases and of the pathological findings, while a delineation of the ray fungus nowhere appears. There are two process plates of cases of actinomycosis of the face and of the neck. A chapter is devoted to the treatment of the disease, and the work closes with an exhaustive bibliography containing 569 references.

Pharmacopœia Japonica. Editio Altera. Tokyo: Anno XXIV. Meiji (1891)

In 1888 a committee of ten was appointed by the Japanese Ministry of the Interior to revise the national pharmacopœia. This committee divided itself into sub-committees, and during the following two and a half years held sixty-eight special, and fifteen general meetings. The result of their labors is embodied in the work before us, sent through the courtesy of Dr. Tsujioka Seisuke, Director of the Yokohama Imperial Hygienic Laboratory. Sixty-seven drugs contained in the first edition have been excluded from this one, while thirty-two new drugs have been admitted. A number of tables are added to the body of the work, giving lists of the most commonly employed drugs which apothecaries are directed to keep always in stock, of poisons, and of other of the more powerful remedies in the administration of which caution must be observed, and finally a table of maximum single and daily doses.

Sulle Febbri Malariche Estivo-autunnali. Per E. Marchiafava e A. Bignami. Roma: Innocenzo Artero. 1892.

This is a fairly exhaustive study of malarial fevers, especially of those occurring in the summer and fall, among which the pernicious forms are most frequently met with. In successive chapters are considered quartan, tertian, and quotidian fevers, autumnal tertian, the differential diagnosis of the various forms, mixed forms, pernicious fever, the action of quinine on the malarial parasites, and the question of phagocytosis in autumnal malarial fevers. The plasmodia seen in the various forms are depicted in two colored plates. Although the monograph is intended as a special exposition of the well-known views of Professor Marchiafava, the labors of other workers in this field are not ignored, a special chapter being devoted to their presentation. The treatise appeared originally in the volume of transactions of the Royal Academy of Medicine of Rome, and the profession is indebted to the learned authors for having republished it in this more accessible form.

Medical Microscopy: A Guide to the Use of the Microscope in Medical Practice. By Frank J. Wethered, M.D. (Lond.), Member of the Royal College of Physicians, Medical Registrar to the Middlesex Hospital, and Demonstrator of Practical Medicine to the Middlesex Hospital Medical School; late Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria Park. With illustrations. Philadelphia: P. Blakiston, Son & Co. 1892.

This is an eminently practical work on the medical uses of the microscope, well written and well arranged, of convenient size, and clearly printed. The introductory chapters are devoted to a description of the microscope and its accessories, and to directions for the preparation, cutting, staining, and mounting of specimens. These are followed by chapters on the examination of normal tissues, tumors, normal and pathological secretions and discharges, such as the urine, fæces, vomited matters, sputum, etc., and of the blood. Another section is devoted to the examination of articles of food and drink, and the book closes with a consideration of bacteriological methods. There are about a hundred illustrations, which add much to the utility of the book as a guide to microscopical examinations. The general practitioner who is not an expert in the use of the instrument will find this book of great assistance to him in his daily work.

Modern Materia Medica, for Pharmacists, Medical Men, and Students. By H. Helbing, F.C.S. Third Enlarged Edition. New York: Lehn & Fink. 1892.

One of the most remarkable phenomena of the medicine of to-day is the constantly increasing number of synthetical drugs coming chiefly from German chemical laboratories. Scarcely a month, we might say scarcely a week, passes that some new remedy is not brought to the notice of the profession. Some of these have found a permanent place in therapeutics, others have been rejected as superfluous, and others yet are passing through the trial stage. It is almost impossible for the practising physician to keep track of all these remedies, however diligent a journal reader he may be, and the standard works on materia medica treat properly enough only of the drugs of this class which are in the first of the above-mentioned categories. The book before us is intended to supply this omission, and to furnish the physician and pharma-

cist with all necessary information concerning the chemical composition, physiological action, and therapeutic application of these synthetic drugs. This work has been well done by the author, and it may truly be said to fill a long-felt want. The third edition has been in large part rewritten, a labor made necessary by the constant addition of new drugs and the extended application of the older ones. An appendix contains brief notes on the very latest of the artificial alkaloids, and also on a number of the more recently discovered natural alkaloids and other non-synthetic drugs. The busy practitioner, as well as the pharmacist, will find this little work a most useful addition to his reference library.

Gynecology. A Manual for Students and Practitioners. By G. W. Bratenahl, M.D., Assistant in Gynecology, Vanderbilt Clinic, New York, and Sinclair Tousey, M.D., Assistant Surgeon, Out-Patient Department, Roosevelt Hospital, New York. Philadelphia: Lea Brothers & Co.

Diseases of Children. A Manual for Students and Practitioners. By C. Alexander Rhodes, M.D., instructor in Diseases of Children, New York Post-Graduate Medical College. Philadelphia: Lea Brothers & Co.

Histology, Pathology, and Bacteriology. A Manual for Students and Practitioners. By Bennett S. Beach, M.D., Lecturer on Histology, Pathology, and Bacteriology, New York Polyclinic. Philadelphia: Lea Brothers & Co.

Practice of Medicine. A Manual for Students and Practitioners. By Edwin T. Doubleday, M.D., Attending Physician New York Hospital, Out-Patient Department, and Member New York Pathological Society, and J. Darwin Nagle, M.D., Adjunct to the Department of Nervous Diseases of the New York Polyclinic; Visiting Physician to the French Hospital; Member of New York County Medical Association. Philadelphia: Lea Brothers & Co.

These are four volumes belonging to the Students' Quiz Series, compiled by a number of physicians connected with various clinics in this city, and edited by Bern S. Gallaudet, M.D., Demonstrator of Anatomy, College of Physicians and Surgeons, New York, and Visiting Surgeon to Bellevue Hospital. They are written in the form of question and answer, and are compiled from the best of the standard works on the subjects treated in them. The subject matter is well arranged, as a rule, and the series may be said to compare favorably with other similar works intended to assist students when making a hurried review in preparation for examination. We cannot, however, admit the claim made in the sub-title of each book, that it is a manual for practitioners as well as students. Any practising physician or surgeon who would find it necessary to consult works of such an elementary character, or who would be satisfied with the information there given, ought to seek some other occupation.

Tuberculosis of Bones and Joints. By N. Senn, M.D., Ph.D., Chicago, Ill. Professor of Practice and Clinical Surgery in Rush Medical College, etc. 8vo, pp. 504. Philadelphia & London: F. A. Davis Co. 1892.

This work gives a very complete review of the subject of bone tuberculosis, and is enriched by the author's individual experience. There is a thoroughness in his methods which cannot fail to commend them to the thoughtful reader. As might have been anticipated from previous good work done in the same line, the discussions of the pathological aspects of the question are full in detail and practical in application. The origin of tuberculosis in bone is no longer doubted, and its frequency in our clinics is becoming more and more marked in proportion as its different phases are studied. The author emphasizes this point with the earnestness of a settled conviction. The different operations necessary for the removal of these foci of disease are fully described historically and technically, as applied to all the joints and bones, and nothing is left to be desired by any practical surgeon who may wish to know of all the possible methods of procedure and the reason for a choice.

The author, true to his surgical instincts, is an advocate for operative interference whenever this is possible, and in common with those of large experience is confident of good results. There is to be no compromise as to the extent of gouging, scraping, or resection, when the operation is to be undertaken for the removal of tuberculous matter. This is as it should be, and the author properly lays great stress upon its importance. As an experienced teacher the author is practical in his conclusions, and has the faculty of impressing the reader with the salient points of the subject; especially is this marked in the number of excellent aphorisms that are emphasized by italicized paragraphs throughout the work.

The Physician's Complete Book of Records, Call List, Record of Visits, Cash Accounts, Ledger, Obstetrical Record, Death Record, and General Memoranda. All complete in one volume. Edited and compiled by Samuel E. Walker, Ph.G., M.D. Pp. 383. Philadelphia: Keystone Publishing Co. 1892.

This is one of the most compact and useful record-books with which we are acquainted. Physicians are proverbially careless bookkeepers, and any system that lessens clerical work cannot fail to be a popular one. A glance at the pages of this book is sufficient to give one an idea of its peculiar excellencies; the daily record of visits and cash accounts being combined. The obstetrical and mortuary records are particularly valuable.

We take pleasure in commending the book to the profession, who will certainly find in it all the advantages claimed for it by the editor.

Die chronischen Erkrankungen der Oberen Luftwege und Unterleibsbrüche. Von Dr. Freudenthal, New York. Pp. 59. Berlin: Heüser's Verlag. 1892.

In this monograph are amplified the author's views with regard to the relations between the two clinical conditions named in the title. These views have already been published in current journals. In this more complete and permanent form they are worthy of a careful perusal. After some general remarks upon the topic, there follow clinical histories of illustrative cases and the tabulated records of 500 cases, giving in each instance the variety of hernia and the upper air-tract lesion existing. Interesting tables are also added showing the distribution of the lesions among different nationalities and in different geographical areas. The publication is alike creditable to the author and a valuable contribution to literature.

Die Lehre von den Naseneiterungen mit besonderer Rücksicht auf die Erkrankungen des Lieb und Kerlbeins und deren chirurgische Behandlung. Von Dr. Ludwig Grünwald, Munchen. Pp. 163. 1893. Verlag von J. F. Lehmann, Leipsig.

The main divisions of the work are into acute and chronic nasal suppuration. Under each heading are discussed the general causes of inflammation, the special locations of the diseased conditions, and an elaborate symptomatology. Chapters are added on prognosis and special therapy. An extensive bibliography is appended. The cuts, of which there are five, illustrate diseased conditions and as well portray the special forms of instruments which the author has found useful. The main secret of success in this class of maladies is to remove whatever tissues, hard or soft, interfere with free drainage, and to

bring about an aseptic condition of the diseased areas. Dr. Grünwald's book is a complete exposition of modern views on this class of maladies.

Rectal and Anal Surgery, with a full Description of the Secret Methods of the Itinerant Specialists. By Edmund Andrews, M.D., LL.D., Professor of Clinical Surgery, Northwestern University Medical School, and Edward Willis Andrews, A.M., M.D., Professor of Clinical Surgery, Northwestern University Medical School. Third edition. 8vo, pp. 164. Chicago: W. T. Keener. 1892.

The third edition of this work is somewhat enlarged, a chapter being added on the neuroses of the rectum and anus. The exposure of quack methods, of quack rectal specialists, makes an interesting and instructive part of the volume, while the practical directions for treatment of the commoner affections of the rectum give the work a peculiar value for the general practitioner.

Mother and Child. Part I., Mother. By E. P. Davis, A.M., M.D. Part II., Child. By J. M. Keating, M.D., LL.D. Philadelphia: J. B. Lippincott Co. 1893.

Although written primarily for the household, this work is not wanting in many practical suggestions, which will prove helpful more particularly to the younger members of the profession. The book contains plenty of sound advice to the prospective and *de facto* mothers, as well as reliable information as to the care of infants and children.

The Physician's Visiting List (Lindsay & Blakiston's) for 1893. Philadelphia: P. Blakiston, Son & Co.

This popular visiting list comes to hand in its usual appearance. It is, as always, neat and practical.

The Uses of Water in Modern Medicine. By Simon Baruch, M.D., Attending Physician to the Manhattan General Hospital and New York Juvenile Asylum; Consulting Physician to the Montefiore Home for Chronic Invalids, etc. 2 vols., pp. 343.

After reading this admirable monograph, we are unable to comprehend why the remark should be persistently made that "there is no modern treatise on hydrotherapy." Not only does Dr. Baruch's book fully fill the void, but it does so more perfectly than would be done by a larger volume which was intended rather for the scientist than for the general practitioner. It is impossible, within the limits prescribed, for us to do justice to its many good points, so that we can only advise the profession to read and judge for themselves. The aim which the author has steadily kept in view ever since he began to make a careful study of the subject of hydrotherapy, as he expresses in the preface, has been that of Winternitz—"to rescue the remedial virtues of water from the empirical environment into which it had fallen." How successful he has been we need not tell to those who are familiar with his writings.

Vol. I., including 115 pages, consists of three chapters, the first of which is devoted to a concise, but comprehensive, historical review of the subject of hydrotherapy; the second discusses the physiological action of water; while the third deals with the technique and clinical application of this useful agent. The paragraph on "Necessity of Precision" sounds the key-note of the entire book, and should be carefully considered by the reader, since it enables him to appreciate the importance of the minute details which would otherwise seem unimportant. "The absolute necessity of an exact technique in the application of water as a remedial measure," we read, "is unfortunately not appreciated by the profession, and its neglect is undoubtedly a cause of the failures which have operated in preventing the more general adoption of hydro-therapeutics by the practitioner." The sections on lavage and intestinal irrigation alone abound with hints which are invaluable to the practising physician. Apropos of the paragraph on the use of injections after normal labor, it is interesting to note that the results of modern aseptic midwifery have fully justified the advanced position on this subject taken by the author, more than eight years ago, when he stood almost alone as an opponent to the indiscriminate employment of the vaginal douche.

Vol. II., including ten chapters, is literally a small cyclopædia of useful information. In the first chapter we are instructed in the proper employment of ablutions, the half bath, sheet bath, and wet pack, which are described so lucidly that "he who runs may read." In order to keep constantly before the reader the fact that he is dealing, not with pure empiricism, but with scientific facts, the description of each process is followed by an admirable *résumé* of the physiological effects. As an illustration of the author's thorough, conscientious work, we need only to refer to the section on the wet pack (Chapters 23 to 37, inclusive).

Chapter 2, on the "Tub Bath," will be a revelation to many intelligent practitioners who thought that they were thoroughly acquainted with the subject before. Here again we notice the importance of attention to details, when the author calls attention (page 39) to the fact that, in omitting frictions while the patient is in the bath, we lose sight of the essential feature in the success of this treatment—"preventing chilling, collapse, cyanosis, and heart-failure." After all, why should there not be just as exact rules in the application of water as in that of electricity? Failures with the latter agent are notoriously due to the inexact dosage. We note a line in italics at the top of page 52, which speaks volumes—that the reduction of temperature is not greater the colder the bath. How different this is from the heroic treatment with the Kibbee cot, which was once vaunted as the *ne plus ultra* of antipyresis! Passing over the descriptions of the douche and sitz-bath, we come to the most elaborate chapter in the book, on "Hydrotherapy in Fevers," which should be read by every physician who wishes to keep abreast of modern therapeutics. The unanswerable arguments in favor of bathing in typhoid fever are clinched by the table on page 109, in which the author has collated, from foreign and domestic sources, not less than 158,421 cases of typhoid showing the results of hydriatic treatment. We cannot dwell upon the many excellent suggestions which meet the eye on every page. Exactness of detail (which, Dr. Emmet has always insisted, is so important to the gynecologist) is regarded as the only guarantee of success. "A slovenly application of the bath, or the substitution for it of some other method—packing, sponging, sprinkling, etc.—will fail and cause discouragement. It must be remembered that this is not cold bathing. The remainder of Vol. II. is devoted to clinical illustrations derived from the author's personal experience, which fully support his claims for the value of hydrotherapy, the last two papers containing a general summary of conclusions. We have reviewed only in the most superficial manner a work which possesses many inherent claims to the recognition of the profession, aside from the author's well-known thorough acquaintance with the matters of which it treats. Unlike many medical works of greater pretension, it attracts by its literary style, which is at once forcible and elegant. Many eminent teachers are not masters of English; they are more at home in the lecture-room than in the selection of words and the arrangement of sentences. Therefore, when a critic finds himself reading a medical book for the pure enjoyment of its literary style, he is conscious of a distinctly novel sensation, and is inclined to believe that an author who can awaken such an interest must himself be imbued with an enthusiasm and grasp of his subject, even if it is a so called "hobby," which cannot fail to influence the reading public.

The Average Number of Prescriptions dispensed in St. Petersburg is about 1,700,000 a year.

Society Reports.

THE NEW YORK ACADEMY OF MEDICINE.

SECTION ON GENERAL MEDICINE.

Stated Meeting January 17, 1893.

A. ALEXANDER SMITH, M.D., CHAIRMAN.

Discussion on the Influence of the Bacterial Theory of Disease upon Clinical Medicine.—The discussion was opened by DR. J. D. BYRON, who gave a statement of the accepted facts and modifications of the theory during the past few years.

Deductions from its Relations to Physiology.—DR. WILLIAM GILMAN THOMPSON said that the subject of the bacterial origin of disease was so closely allied to well-known normal physiological processes as to render deductions from the latter largely applicable to the germ theory. The following facts might be cited in support of this statement:

1. It is proven that in certain diseases bacteria contained in the blood or the tissues either generate ferments or, themselves acting as ferments, generate toxic principles, such as leucomaïnes, albumoses, or "toxines."

2. These bacteria may sometimes also generate anti-toxines, which are substances inimical to their own growth, either by killing the bacteria outright, or by rendering the medium in which they exist unfit to support them.

3. This identical process has been observed in certain physiological actions. Thus, under proper conditions, the yeast-germ may produce an excess of alcohol which, if not removed, destroys the germ's vitality; and strong alcohol added to the fermenting fluid retards or destroys the process, just as an anti-toxine added to the blood may destroy the activity of a foreign germ or ferment. Again, certain putrefactive fermentations result in the development of phenol, creosol, etc.—substances which act as anti-toxines to check the very fermentation which produced them. Iodol and skatol in the intestine exhibit a similar action in connection with the pancreatic fermentation which gave them origin. Many substances, such as the proteid snake-poison and "high" game or cheese, would be extremely toxic in the systemic circulation; yet they may be swallowed at times with impunity, because they encounter normal anti-toxines or ferments, either in the alimentary canal or the liver, which neutralize or destroy them.

4. Proteid materials furnish some of the strongest physiological poisons known to affect the heart and central nervous system, and they also form most active and diverse soils for the operations of bacteria. Germs like the bacillus anthrax are known to produce scarcely any toxine while growing in a weak beef-tea containing but little proteid, but on being transplanted to a richer soil of blood-fibrin or tissue albumin, a toxine is formed abundantly. Our knowledge of the proteids of the blood is as yet in its infancy. Their primary source is from a great variety of albumins in the blood, which enter the blood as complex unstable modifications of the original substances, and form, in addition to the serum albumin, many allied products which at times may circulate as albumoses, different peptones, etc. In such media as the blood and more highly albuminous tissues germs have access to a soil at once rich in variety and in quantity of proteid material from which to develop various toxines, ferments, or albumoses.

5. In many diseases characterized by systemic poisoning, like diphtheria, the germs themselves are distinctly localized, and may not be found in the blood at all. The toxines are present, however, and here again we find analogy among the normal physiological fermentations. The yeast-germ, in addition to alcohol, produces an inverting ferment which converts cane to grape-sugar, and the alkaline fermentation of normal urine is accompanied by the production of another inverting ferment. In both these instances the ferments are capable of independent action when completely separated from the germs which were at first present to produce them.

Dr. Thompson went on to say that although the study of animal alkaloids was comparatively new, already at least seventeen distinct ptomaïnes had been isolated from the tissues of the cadaver, and ten or more leucomaïnes from the normal living body; some of which were closely allied in action and reactions to the toxines produced by cultivating in freshly derived proteids such germs as those of cholera, diphtheria, tetanus, typhoid fever, anthrax, etc.

Many facts like the foregoing, obtained by observation of physiological phenomena, all strongly confirmed the possibilities of that portion of the germ theory of disease which concerns the influence in the human body of bacterial fermentation, and its accompanying production of toxines and anti-toxines. The appropriate deduction from this standpoint to the field of therapeutics and clinical work was, that antidotes such as anti-toxines, when produced by the disease-germs themselves, either within the body or by external cultivation in proteid media, will afford, when we understand them better, the natural and most efficacious means at our disposal for combating germ diseases. When we contemplated the brilliancy and the thoroughly scientific character of the manifold inoculation experiments being made at the present day in this field of research, there seemed to be every promise of attaining more and more practical beneficial results.

Influence upon the Clinical Methods of Individual Practitioners.—DR. HENRY F. WALKER said he had been asked to give a statement as to how far the bacterial theory had influenced him in practice; how much, if at all, his practice had been modified by it. He had, however, very little to say. He accepted this theory of causation, and he thought that by means of it we had made a great advance in establishing medicine as a more certain science. But he had to acknowledge that his therapeusis had been but little changed, and this was because therapeutics had not caught up. Ever since men first made diagnoses, and confirmed opinions by autopsical proofs, therapeusis had been a laggard. One man had tried to displace disease by weakening the patient, another by fortifying him, and a third had tried to baffle disease by attacking symptoms as they appeared. It seemed now as though the era was approaching in which by killing disease we might at last claim that we had cured a patient. But this must be by means which we did not yet possess—by poisons deadly to germs, innocuous to mankind. So many of the remedies destructive to bacteria were equally destructive to man that one hesitated in their use, though he had personally tried almost the full list. In diphtheria he had used everything, from corrosive sublimate to pineapple-juice, and he was not sure but that the cases which had had only local treatment, with supporting care, had done as well as those which took active poisons for constitutional effect. In pneumonia he had not pursued a treatment based on the bacterial theory, unless the large dosage by quinine came under that head. In typhoid fever he had used salol, but cold baths in some cases and dietary care in milder forms had been his reliance. In tuberculosis of the lungs the patient usually went to the bourne of the specialist, never to return to the general practitioner, so that he had little experience to relate in regard to it. In all cases of persisting cough with expectoration he got a microscopic examination of the sputa. Several of those cases had made apparently complete recoveries, though the tubercular bacilli had proved most abundant. So the belief in the bacterial theory of tuberculosis had helped his prognosis in the next sufferer.

In his obstetrical practise there had been a great change in his methods of care of himself, as well as of his patient. He never made an examination in labor, however frequently repeated, without first washing his hands and

thoroughly disinfecting them with bichloride solution. At birth the babe's eyelids are thoroughly cleansed. The mother's vulva was washed with a bichloride solution then, and always afterward, and if there had been any laceration the wound was made aseptic and immediately closed with catgut sutures. He used the bichloride sanitary pad, instead of napkins, and had the pads burned. He had wholly forbidden the use of a syringe for the vagina, unless symptoms gave rise to suspicion that shreds of decomposing material remained in the uterus. Then he used the intra-uterine douche, and perhaps the curette also. The babe, if nursed by the mother, was applied to a nipple thoroughly cleansed both before and after nursing. If it was fed from a bottle, that and its annexes were kept sterile, and sterilized milk was employed. As long as the milk was diluted, boiled water was used for this purpose. All these precautions with regard to mother and infant had markedly diminished his anxiety by diminishing his cases. His treatment of abortion was as particular and as absolutely aseptic as that of confinement.

Though he was of the opinion that we should have no true bactericides until the pathological laboratory gave them to us, and that until that time we should have to use old methods in combating disease, yet a belief in the bacterial theory, he said, had helped him in the care of his patients. He had always felt that one who was ill had better be in bed, and if in bed, had better be isolated. The sick room was too often the family resort. We should have fewer colds in the head running through a household, fewer influenzas, less pneumonia, if these patients were isolated and similar sanitary precautions taken with regard to them that we used in respect to scarlatina, for instance. We know these diseases to be more or less infectious, and now that we know their cause to be actual entities, received so subtly that we did not discuss the method, it was fitting that sufferers from such diseases should be kept apart from the uninfected. The bacterial theory had strengthened his belief in this, and his effort was always, as far as possible, to stamp out a household epidemic by a family quarantine.

Dr. Andrew H. Smith, who was unable to be present, sent a communication in which he said that, in reviewing his practice for the past few years, he could not see that it had been changed to any great extent by the modern discoveries in bacteriology. In fact, he had previously arrived empirically at methods of treatment whose efficacy was now explained by the results of these recent investigations, and they were not greatly improved or changed by such investigations. Thus, in common with everyone else, he had given quinine in malarial fever long before he had heard of a *plasmodium malariæ*, and although it was a satisfaction to know that the plasmodia disappear under the action of quinine, the new knowledge did not affect the old treatment. In like manner, long before he had seen or heard of a gonococcus, he was in the habit of using in the treatment of gonorrhœa agents which were now known to be germicides, and the discovery of this micrococcus had seemed merely to lead him to place more stress upon local treatment.

In gastro-intestinal disturbances we had long ago recognized the rôle played by fermentation, in the restricted sense in which the word was formerly employed, and while in late years the list of antiseptics was vastly increased, we applied them much in the same way as when we called them anti-ferments. The treatment of typhoid fever now most in vogue, and to which he gave a qualified adhesion, took very little note of the discoveries of Koch and Eberth, and intestinal disinfection was now generally regarded as a delusive dream.

The management of pneumonia was not greatly influenced by the recognition of the diplococcus, though this was important as sustaining the theory of a specific infection, and thus leading us to look behind the merely local condition. In tuberculosis of the lungs the detection of the bacillus gave precision to the diagnosis, and emphasized the necessity for providing in every possible way for improving the nutrition: but as yet it pointed to no specific treatment, and he could not say that it materially influenced his management of the disease. Its influence upon prophylactic measures, however, was of the greatest importance.

The same remarks would apply to the Klebs-Loeffler bacillus of diphtheria. Before its discovery the conviction had been general that there was a specific element of infection in or beneath the membrane, and measures perhaps quite as efficient as those now in use had been employed to destroy the infectious material and prevent its dissemination. He did not know that his selection of disinfectants was influenced by any peculiarity of this special microbe. In cholera he had had no experience, but he readily conceded the great value of bacteriological research in fixing the diagnosis and pointing out methods of prevention.

In various manipulations included in the office work of the physician, such as the examination of the different mucous canals, the introduction of the catheter, etc., the knowledge of the existence of germs, and of the evils that may follow their implantation, exacted from every one the most scrupulous cleanliness of hands and instruments.

Influence upon the Clinical Work of the Profession at Large.—Dr. Alfred L. Loomis, after stating that he supposed he was to give his ideas from the consultant's standpoint, spoke as follows: When the microbic etiology of disease began to be accepted by the profession, in other words, before the profession as a whole were ready or willing to accept it, I found that there were a large number of practitioners who readily accepted it, and who believed that the only way to treat infectious diseases was to destroy the microbe which produced them, and I found a large number who were in the habit of introducing into the system different germicides, either through the lungs, by inhalation, or through the stomach, or by the skin, with the belief that by so introducing these agents they could destroy or render inoperative the specific pathogenic germ which was producing the diseased process. This was most prominent, perhaps, with those who believed in antiseptic inhalations, and I rarely saw cases of pulmonary disease (especially pulmonary tuberculosis) in which some form of antisepsis was not employed by inhalation. I also found that there were a large number of practitioners who believed, or to some extent accepted the idea that by the introduction of antiseptics into the system through the stomach they could control to a greater or less degree the action of the microbe, and thus arrest the disease process.

At that time I was a looker-on, and was not willing to interfere with the plans of treatment and modes of practise which I was constantly meeting with: but, after watching for some time the action of these plans, and especially the results which were produced by inhalation, I came to the conclusion that none of the germicides thus employed had any influence upon the microbes themselves, and that if there was any change produced in the system, it was due to the anæsthetic effect of the agent used, rather than to any other. As the profession came to know more of the life history of the germs, and as they came to know more of the manner in which the latter acted under these different agents, I found that gradually most were loosening themselves from these ideas, and that the theory of their germicidal properties was gradually being abandoned. Intelligent practitioners became more and more of the opinion (and are still continuing to do so) that if we are to fight successfully this league of microbes, we are to do it by increasing all activity.

As we now treat our patients, it seems to me that the profession is going back to the restorative mode of treatment which was formerly in vogue, and it also seems to me quite evident that the different methods which we are employing to-day to combat these infectious diseases

have that end in view, and that while we perhaps understand the action of these remedies on these plans more and better than we used to do, still they are the same plans of treatment. It is the old restorative medicine. We feed our patients, we cleanse our patients; we give them fresh air; we fill them with tonics and cod-liver oil; we advise change of climate, not with the idea of destroying the germs, but for the purpose of furnishing the individual with a soil which shall resist the action of these germs. And as I look at it in meeting my fellow-practitioners, the more I am convinced that the great benefit which the study of bacteriology has done to the profession is in the prevention of disease. As Dr. Walker has shown us, we are becoming more careful as to the manner in which we do our every-day work, more careful in our intercourse with our patients, so that we shall come to them clean-handed. Therefore it seems to me that the greatest progress which those who have been engaged in bacteriological studies during the past ten or fifteen years, have made for the profession has been in proving to us this benefit of the prevention of disease.

Character and Permanence of its Effect upon Therapeutics.—Dr. William H. Thomson said that the principle based on bacteriology which had most effect on therapeutics was that practically no decomposition of organic tissues or fluids occurs without the agency of micro-organisms, and that of the activity of these organisms many products are formed out of the tissues or fluids acted upon which may be locally irritant or generally poisonous. Hence his treatment of every form of mucous catarrhal inflammation was largely based upon the use of supposed antiseptics, and the results of the employment of such agents had seemed to be beneficial in the following cases:

1. Nasal catarrh he had treated for nearly three years, with apparently better results than before, by insufflation twice or three times a day with aristol, and latterly also with camphor. For ten years previously his usual method of treatment was insufflation of bismuth subnitrate, either alone or with small proportions of thymol. Sometimes, in connection with the bismuth insufflations, the patient was directed to smell a few drops of carbolic acid and aqua ammonia in alcohol sprinkled on an old handkerchief. We now used aristol exclusively to blow into the ear in otorrhœa.

2. The treatment of gastric catarrh and ulcerative affections of the stomach by gastric lavage was based on the same principle. Medicinally, five grains of resorcin in solution an hour after meals and at night was his favorite remedy in the same conditions, and this also was based purely on antiseptic principles.

3. Ptomaïnes were of organic origin, while leucomaïnes were merely the result of chemical processes. Ptomaïnes were the product of decomposition; leucomaïnes of retrograde metabolism. Therefore it was in the gastro-intestinal tract that we have the chief source of ptomaïne poisoning. It was to ptomaïne poisoning, in his opinion, that the most frequent excitants of the symptoms of functional neurosis were due, such as intermittent neuralgias, convulsions, or disorders of innervation marked by more or less intermittent paralytic or depressed conditions of nervous functions. The symptoms due to organic nervous lesions, on the other hand, were never truly intermittent. His chief reliance, therefore, in the treatment and in the prevention of functional nervous diseases was in the regulation of the diet, so as to obviate particular decompositions in the gastro-intestinal tract, and, in the second place, to employ certain supposed antiseptics. Bismuth subnitrate and salicylate of sodium were very frequent ingredients of his prescriptions for such patients. He also often used salol, naphthol, and similar drugs of kindred action in connection with the latter. He constantly made use of these remedies in cases of migraine, of epilepsy, and of hysteria, besides in peptic asthma, in peptic insomnia, and in melancholia accompanied by a quick pulse. He could not but regard the results of such an employment of antiseptics as an improvement on the former exclusive reliance on so-called nervines, and so far, therefore, as illustrative of the bearing of bacteriology on therapeutics.

4. He thought the use of salol and of antipyrin beneficial in diabetes mellitus, as preventives of antoxæmia by a local action in the intestine.

5. Intestinal antisepsis was a prime indication in the treatment of typhoid fever. His measures, therefore, were larger mercurial purgatives in the first ten days of the fever, with forty to eighty grains of bismuth subnitrate in the twenty-four hours, in connection with pepsin, itself also an antiseptic, and lime-water in equal parts with the staple febrile food, milk. Under this treatment tympanites in his experience was rare, and diarrhœa easily checked, if it occurred. What was true of febrile diarrhœa was equally applicable in the treatment of ordinary diarrhœa, whether acute or chronic, viz., that intestinal antisepsis was a prime indication, taking the precedence of all other indications for treatment. The natural secretions of the intestine seem themselves powerful antiseptics, and hence many cases of intestinal flux were to be attributed to their deficiency. They should therefore be restored as soon as possible; but, in addition, antiseptic remedies should be regarded as more curative of such derangements than opium or astringents. In dysentery naphthaline had proved beneficial in his hands, along with the resin of turpentine in pill form, while locally the principle of lavage was of decided service. In chronic dysentery it was his constant practise to prescribe large enemata with oil of peppermint to irrigate the lower bowel after every movement.

6. On the same principle he now prescribed but few medicines in the treatment of cystitis; relying chiefly on ounce injections into the bladder, from a Politzer bag, of a solution of one-half to one grain of resorcin with three grains of boric acid to the ounce of water, till the water from the bladder was clear.

7. As a general practitioner he had his proportion of cases of skin diseases, and antiseptic applications, used as such, were here his main reliance.

8. In diseases of the lungs and air-passages the indication for disinfecting the purulent discharges was always constant, and were it in these affections alone that bacteriology directed our therapeutic aims, it would still remain as a most marked illustration of the place which the rôle of micro-organisms in disease assumes in our principles of treatment. He thought, however, that he had adduced enough instances to show that to bacteriology we owe the greatest and most operative influence in shaping the medical practise of our day.

Dr. S. Baruch expressed his scepticism in regard to the practicability of intestinal antisepsis, except possibly in the case of summer diarrhœa in infants and young children, and made some additional remarks, which were in the main in accordance with the views given by Drs. Walker, Smith, and Loomis.

Dr. Charles E. Quimby was elected Chairman of the Section for the ensuing year.

Infection by the Streptococcus in Small-pox.—At a meeting of the medical society of the hospitals, M. Chantemesse read, in the name of M. Le Dantec, a memoir, of which the following are the principal conclusions: 1. In small-pox death appears most often due to generalization of the streptococcus throughout the organism. 2. The streptococcus is found in the viscera, sometimes alone and at other times associated with colonies of other microbes, usually of the staphylococcus albus. 3. Under the influence of variola the streptococcus acquires an extreme virulence. 4. Variola, however mild in the beginning, always becomes serious if it develop within a system already infected by streptococci. 5. Treatment should be prophylactic as regards invasion of the organism by streptococci.—*Medical Bulletin.*

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 25, 1893.

R. H. SAYRE, M.D., VICE-PRESIDENT.

Hæmatoma of the Dura Mater.—DR. WILLIAM G. LE BOUTILLIER presented a brain showing a hæmatoma of the dura, which covered a large part of the convex surface of the left hemisphere, and which measured in the fresh state two inches in diameter and one-half inch in thickness in its central portion. It had been removed from a man seventy-two years of age, who died after being in the hospital only two days. There had been no paralysis; he had only complained of feeling weak. The hemorrhage was the result of a chronic pachymeningitis.

Carcinoma of the Pancreas.—Dr. Le Boutillier then presented a specimen from a woman seventy-three years of age, who was admitted to the Almshouse on December 28th, and died on January 2d. When admitted, there was slight cough, anæmia, and marked jaundice. Physical examination showed two tumors in the abdomen, one hard, movable, about two inches in diameter, and situated midway between the umbilicus and the anterior superior spinous process of the ilium, and the other very solid, slightly movable laterally, and lying in the epigastrium and left hypochrondrium. The patient had only a slight elevation of temperature, 100° F., but she was greatly prostrated and refused food. The tumor on the right side was found to be a dilated gall-bladder, which contained a gall-stone and a somewhat turbid fluid, looking like pus. The other tumor proved to be the pancreas, which contained two carcinomatous masses. The cystic and common ducts were also dilated, and contained the same kind of fluid. The orifice of the common duct was surrounded by a dense growth in the head of the pancreas, and its orifice was obliterated. There were numerous enlarged lymphatic glands behind the pancreas.

Double Hydronephrosis from Carcinoma of the Bladder.—Dr. Le Boutillier also presented a specimen which had been removed at an autopsy on a woman thirty-five years of age. A complete history of her previous condition could not be obtained, but it was learned that there had been for some time previous a vesico-vaginal fistula, and that she had been subjected to the operation of suprapubic cystotomy. There had been occasional profuse hemorrhages. Toward the end of last December, there was emaciation and gradual loss of strength, with headache, delirium, but with little elevation of temperature, and a diminution in the quantity of urine. She died on January 19, 1893, and an autopsy was held on the following day. The pelvis was alone of interest. The bladder, uterus, and its appendages were all firmly matted together; both ureters were dilated at the crest of the ilium, the right measuring eighteen millimetres, and the left fourteen millimetres; they were filled with transparent urine, and both were bent upon themselves. There was a condition of hydronephrosis of both kidneys, but it was more advanced in the left. The bladder-wall was the seat of a carcinomatous deposit which had caused obstruction of both ureters, but the left ureter had been reopened by ulceration. There were secondary deposits in the left psoas muscle and in the right of the pelvis, as well as slight enlargement of the posterior gland.

DR. S. T. ARMSTRONG remarked that it was possible that temporary relief could have been obtained and life prolonged had the operation of transplanting the ureters into the rectum been performed.

A Gumma of the Brain.—DR. C. E. BRUCE presented a brain which had been removed from a man thirty-one years of age, whose family history was negative, and who denied having had syphilis. He enjoyed good health up to April, 1890, when he first sought medical advice because of an ache of the face. In July of the same year he was suddenly seized with facial paralysis in all the branches of the facial nerve. In March, 1891, there was a return of paralysis, associated with ocular disturbance, and an examination made at that time by Dr. David Webster showed a hemorrhagic retinitis. His facial paralysis was relieved by the administration of large doses of iodide of potassium, but this was only very temporary, for shortly afterward there was a third attack of paralysis from which permanent relief was not obtained. During the summer of 1891 he had much difficulty in breathing, his pulse was weak and dicrotic, and he had swelling of the feet and pains in the limbs, which did not yield to the usual anti-rheumatic remedies, but were relieved by the administration of iodide of potassium. Shortly after this he began to have certain hallucinations. Last November he suffered a relapse of the facial paralysis, associated with loss of vision in the right eye and diminution of vision in the left. His right eye was much congested and bulging: there was no paralysis of the tongue, but he had a staggering gait, and showed a want of co-ordination, and complained of much pain in the back of the head and neck. The pulse was weak, the breathing difficult, and the temperature normal, and the urinary examination negative. His hallucinations became greatly aggravated at this time. Dr. Webster found, on December 25th, an unusually abundant hemorrhagic retinitis of both eyes, and suggested the use of the oleate of mercury, which was tried, but without producing any notable effect on the progress of the disease. The patient died on January 20th, with symptoms of cerebral compression. A post-mortem examination was made of the brain only. The dura mater was found intensely thickened and closely adherent to the brain surface along the longitudinal fissure there were several large serous cysts of the pia mater over the left frontal and temporal lobes; there was considerable fluid in the ventricles, and there were evidences everywhere of an extreme degree of atheroma. In the left optic thalamus and corpus striatum was a firm, dark mass, which proved on microscopical examination to be a gumma.

Nodules of Carcinoma and Adenoma in the Same Liver.—DR. H. S. STEARNS presented a liver removed from a man fifty years of age, who died on the fifth day of a lobar pneumonia. The liver showed eight or nine small, round, white nodules, the largest one perhaps one and one-half centimetre in diameter, situated directly beneath the capsule of the organ, and extending into its substance. Examination of sections showed in certain areas adenomatous tissue, and in others directly along side of it typical carcinomatous alveoli very much compressed. There were no other evidences of carcinoma. A number of suggestions were made as to the nature of these deposits, but it was not until they had been examined microscopically that it occurred to anyone who saw them that they were carcinomatous.

Pericarditis with Much Fibrinous Exudation and Thickening.—Dr. Stearns also exhibited a specimen from a case of pericarditis. The patient had been for several years past a night watchman in Charity Hospital, and had been in good health up to a month ago, when he began to suffer from orthopnœa, and the lower extremities became œdematous. He passed sixty ounces or more of urine daily, having a specific gravity of 1.028. Three days ago he suddenly died while at stool, and an autopsy showed the apices of both lungs to be completely solidified with old tubercular deposit which had not ulcerated, and an accumulation of fully eight ounces of fluid in the pericardial sac. The chief points of interest were the marked thickening of the pericardium and the abundance of fibrinous exudation.

Rupture of the Liver.—DR. E. HODENPYL presented a specimen of rupture of the liver, which had been removed from a woman who had committed suicide by throwing herself out of a fourth story window. At the autopsy, made two hours after death, and six hours after the receipt of the injury, comminuted fractures of the ninth and tenth dorsal vertebræ were the only fractures which could be discovered, and they had led to hemorrhage into the pleural cavity, so that each cavity contained

about one quart of blood. The abdominal cavity contained about three quarts of fluid blood. All of the organs were normal except the liver, which exhibited an extensive laceration of its left lobe, apparently the result of simple compression. There were no marks of violence on the external surface of the body.

A Thickening of the Intestinal Wall Resembling Carcinoma.—Dr. Hodenpyl also exhibited under the microscope a section of intestinal wall which resembled very closely the structure of carcinoma. The specimen had been removed from a man who died of delirium tremens shortly after admission to the hospital, so that no history was obtainable. On opening the abdomen the intestines were found firmly matted together everywhere by old, firm, fibrous adhesions; the great omentum was shrivelled up to a small cord, and the lumen of the gut was here and there so encroached upon as to hardly admit an ordinary lead-pencil. The extrusion of particles of fat through these bands of fibrous tissue, presented at first glance an appearance not unlike that of colloid carcinoma. The specimen was taken from the outside fibrous coat of the intestine near the attachment of the mesentery, and showed little spaces filled with large, flat cells, and well-marked alveoli. On first thought he considered the case one of carcinoma, but on further consideration he had come to the conclusion that the appearance presented under the microscope was due to a proliferation of the endothelial cells.

Dr. S. T. Armstrong concurred in this view.

Aspermia.—Dr. F. Tilden Brown exhibited a specimen of abnormal seminal secretion without the elements from the seminal vesicles or the testicles. The fluid contains fatty granules, epithelial cells, small hyaline cells, and the corpora malacia, and notwithstanding that it was the secretion from the prostatic urethra, it possessed the characteristic odor of the normal semen. The specimen was from a man thirty-four years of age, who had been married seven years. His wife had been examined, but no cause for sterility was found in her. He had had his semen examined by one or two physicians, but the reports regarding the existence of spermatozoa were conflicting. Nine years ago he had had a slight urethral discharge following sexual exposure, but it had subsided in a very short time, and the physician who attended him then expressed the opinion that it was not a gonorrhœa. He had not had epididymitis or orchitis, or any traumatism of the perineum or testicles, and an examination of the external genitals showed them to be apparently normal. The speaker said he had been unable to find any spermatozoa. There was apparently a congenital occlusion of the ejaculatory duct.

The Society then went into executive session.

We regret to learn that it will be inconvenient hereafter for the editor and publishers of the esteemed *Medical News* to visit the science centres of the great town of St. Louis. The editor of the *Medical Mirror* has been cut off from his *News*, and he says this: "If any of the conductors of the *Medical News* ever find themselves within the corporate limits of the city of St. Louis, we trust that they will ring up the editor of the *Medical Mirror*, and we shall take special pains to demonstrate to them that St. Louis is directly the opposite of any such spirit as manifested by these misrepresentatives of the city of brotherly love."

What's the Use of Quarantine?—A minister near Cincinnati thinks that this nation is favored of Providence, and that consequently there is no fear that cholera will visit us next year. The plague, he says, is sent to discipline mankind, and it begins therefore in the far East, where everybody is very bad, and scarcely one belongs to any of the Christian denominations. But "it is rare," he says, "that so dire a plague afflicts us, which proves that we are recipients of God's choicest blessings, and we should show we appreciate them by becoming Christians."

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Eighty-seventh Annual Meeting, held at Albany, N. Y., February 7, 8, and 9, 1892.

Lewis S. Pilcher, M.D., of Brooklyn, N. Y., President, in the Chair.

(Continued from p. 184.)

Third Day, Thursday, February 9th—Morning Session.

To Abandon the Coroners System.—A communication from Orange County recommends the abolition of the coroners system. It was referred to the Committee on Legislation.

Dr. A. Jacobi gave notice of a resolution to change the by-laws at the next annual meeting, by having the chief officers nominated in open meeting, instead of through a nominating committee.

Dr. Theodore Dunham, of New York, reported a case of epithelioma of the face, and described a special method of covering the exposed area by skin flaps.

Uræmic Convulsions, with Special Reference to Treatment in Adults.—Dr. R. C. M. Page, of New York, read the paper. In treatment one should bear in mind three factors for the production of the convulsions—disturbance of the circulation, abnormal sensibility in the nerve-centres, vitiated condition of the blood. Immediate treatment should be directed toward regulating the circulation as well as the sensibility of the nerve-centres; to correct the vitiated condition of the blood required more time; there should be no routine treatment of purging, sweating, and diuresis. Blood-letting was a powerful means of averting immediate danger, but it should be confined to acute and sthenic cases, if used at all. It were better to employ a remedy which would produce an equivalent effect and retain the blood. Chloroform, better opium, were more or less efficient in controlling nerve sensibility. Veratrum viride was the remedy which was equivalent to blood-letting, reducing arterial tension, and in his experience was quite safe in uræmic convulsions, although sometimes producing effects apparently alarming.

The Treatment of Inguinal Hernia.—Dr. Alexander Dallas, of New York, read the paper. The importance of the correct treatment of hernia cannot be over-estimated, for in this country alone there are over three and a half million cases—a ratio of thirty cases of rupture to every practising physician. The subject may be divided into: 1, Palliative; 2, mixed; 3, radical; 4, the treatment of strangulated hernia.

1. *Palliative.*—Palliative treatment includes all those measures employed to prevent the descent of the protrusion, but more particularly the application of different forms of trusses; the adjustment of a truss can only be correctly done by the physician himself, and he has no right to delegate the duty to others. The ordinary trusses are faulty in construction and injurious in their results. The truss I now show you has been devised to overcome these objections. It is light and easily adjusted. The pressure is from above downward and directly over the internal ring. It is the only truss which can be retained there. Truss-pressure is purely mechanical, and other measures must also be employed if success is desired.

2. *Mixed Treatment.*—On failure of truss treatment other measures must be employed for this purpose. I have devised an instrument which abrades or freshens the internal surface of the canal and completely obliterates it. The results of this operation have been wonderfully successful. There is no danger in its use, no reaction, and the patient is only confined to bed for three or four days.

3. *Radical Cure.*—When milder measures fail the "radical cure" must be employed. To succeed, the sac must be obliterated, the internal ring closed, and the weakened tissue strengthened.

4. *Treatment of Strangulated Hernia.*—The ordinary treatment is far from satisfactory: the treatment I have

already recommended has always proved successful. Reduce the protrusion promptly and without injury.

Dr. De Garmo discussed the paper.

Dr. George D. Holsten read the "History of a Case of Eruption from Iodoform, Iodide of Potassium, and Aristol." The iodide of potassium had produced a constitutional effect, while the other two remedies, used at different times, produced only a local eruption.

Dr. J. S. Cooley read the report of a case of severe abdominal injury which terminated in recovery. The wound was made by the tearing of a picket through the abdominal walls, but there was no intestinal rupture.

Dr. Lewis Balch told of the extensive preparations which the State Board of Health had made in view of the possibility of cholera being introduced into the United States or Canada.

Dr. Richmond read a paper on the diagnosis of typhoid fever and some latent fevers.

Other papers were read by title.

Correspondence.

TESTECTOMY FOR EPILEPSY.

To the Editor of the Medical Record.

Sir: An editorial appeared in the Medical Record of December 24, 1892, noting the fact and commenting upon a case of castration of a man for melancholia, recently performed in the West. The article further suggested that the South had popularized oöphorectomy, and that now the wild and woolly West was coming in for its share of thunder by placing on a scientific basis "Testectomy" (a very good word indeed) for nervous and mental conditions. The closing sentence was one of those incomparable flashes of satire for which the editor is justly renowned, to the effect that it was now in order to observe reports captioned "My Second Series of One Thousand Cases of Testectomy," with details of technique, etc. (I do not quote verbatim, as I have not the article at hand). I desire to report my first of a series of a thousand cases of testectomy for epilepsy. The operation was not suggested by the article, as I did not read it until several days after the operation had been performed, and it had been contemplated for several weeks beforehand. It is the first operation of the kind for that particular disease, so far as I have been able to ascertain, and I desire that the South shall maintain her glory for operations of such benefit to the human race (according to Malthus), and not be stripped of it, especially by the blatant and swashbuckling West. Seriously the case is briefly thus: Sherman E——, white, aged twenty, an inmate of the Hamilton County (Tenn.) Hospital, a pronounced brunette, tall, slender, weight about one hundred and thirty pounds, and well nourished. His hands are peculiar, being long, small and Simian. Mentally he is considerably below par, although he answers ordinary questions intelligently. In temperament he is reticent, quiet, somewhat morose, usually tractable, but at times obstinate and easily irritated by teasing. No history of brain injury. Could not ascertain his father's history, but his mother is in good health, except an occasional attack of migraine. Until the age of puberty he had occasional attacks of "petit mal." After that time he began to have "grand mal" two or three times a year, increasing in frequency and severity until, at the time he came under my observation, seven months ago, he would have perfect "cyclones" of epilepsy lasting from one to four days. The convulsions, lasting from ten to twenty minutes, would recur after intermissions of one to six hours. During this intermission he was invariably possessed with a furious and irresistible satyriasis, which he relieved by masturbating frequently, regardless of any one's presence. During the interval between the "cyclones," he was never observed to commit such an act. Immediately, and sometimes before the exacerbation, he would be vicious and violent, requiring restraint. The different bromides had a good effect on him, lessening the severity and frequency of the attacks, producing at one time an immunity of seven weeks. The stomach finally became absolutely intolerant of the drug, after many trials, and the disease returned with its former vigor. He became considerably worse in all his symptoms, gave evidence of his libidinous tendencies toward some of the female patients on the premises, and was finally considered dangerous. After due deliberation and consultation, and at the earnest solicitation of his mother, I enucleated both testicles on December 28, 1892, assisted by Drs. Berlin, Clark, and Mankers; the patient recovering nicely in a few days. At his next regular period, which occurred a week ago, he had two light paroxysms, which passed off rapidly and with very little excitement. It is entirely too soon, as yet, to form any opinion as to any permanent benefit, but certainly he has been benefited by being more quiet and docile. As to the justification of the operation, I know that the world will hold up its hands in holy horror; but many thousands of women have been castrated on less provocation than existed in the case of this poor unfortunate, who will now not only be not vicious, but will probably be able to contribute something toward his support. Reasoning "anaphrodisiacally" (a souvenir word coined for the Chicago Exposition) from a bromide standpoint of view, I consider that the paroxysms were caused by reflex excitement from overcharged seminal vesicles. Removing the seminal supply would then, therefore, remove the exciting cause. From an andrological point of view, it occurred to me that his race should not be perpetuated, the which was not improbable. It seemed also justifiable from a humanitarian stand-point, in the fact of greatly mollifying his frequent recurring condition of viciousness and rendering him less liable to be a nuisance, not only to himself but to everyone else. I know I am endeavoring to defend myself before I am accused, but under similar or even less circumstances, would do the same operation where practical. The only remarks as to technique is that silk ligatures and catgut sutures were used, and the only dressing, flexible collodion.

Cooper Holtzclaw, M.D.

Chattanooga, Tenn.

LESIONS OF THE PONS VAROLII.

To the Editor of the Medical Record.

Sir: Dr. Starr's rare and interesting case of "Alternate Hemianalgesia," and his statement that it is possible to arrive at a very exact diagnosis in lesions of the pons varolii, recalls two cases confirmatory of this. One of these I saw in consultation with Dr. A. R. Carman, where, in addition to the difficulty of deglutition—paralysis of the tongue, and other symptoms indicative of damage to the pons varolii, we noticed a rare symptom referable to the circulation. The pulse in the right radial artery would repeatedly disappear and reappear, and was suggestive as indicating injury to the vaso-motor nerve tracts, and consequent interference with the contractile power of the arterial walls. In the other case the lesion was supposed to involve both the pons varolii and the crus cerebri.

The attack occurred suddenly in a man, aged fifty-five, who for years had not been detained at home even for a day by reason of illness. As related to the extremities, the face, and the tongue, the paralysis was of the usual character. In addition, however, there was some difficulty of deglutition, with painful hyperæsthesia of the paralyzed side of the face, due probably to injury to the fifth nerve. The patient was also exceedingly emotional, bursting into tears at the slightest cause. These symptoms pointed undoubtedly to lesion of the pons in its upper lateral portion. The symptom that indicated damage to the crus cerebri was paralysis of the third nerve, on the same side as the brain lesion, producing ptosis, dilitation of the pupil, and external squint.

The temperature of the paralyzed limbs was decidedly higher than normal, as has been frequently observed in

demonstrated cases of lesions of the pons varolii. As was pointed out many years ago by Dr. Russell Reynolds, and emphasized in the earnest work of Dr. Hughlings Jackson, cerebral localization is the first and important thing in all cases of brain disease; and it is becoming recognized that American neurology is not behind in the quality of its work in this direction.

A. D. Rockwell, M.D.

February 11, 1893.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 11, 1893.

	Cases	Deaths.
Typhus fever	33	14
Typhoid fever	7	5
Scarlet fever	192	18
Cerebro-spinal meningitis	1	4
Measles	76	3
Diphtheria	128	40
Small-pox	4	1
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

America as a Field for English Physicians.—A correspondent of *The Lancet* gives an interesting and objective account of the chances for success which an Englishman would have in this country. After stating some of the legal requirements for starting in practice he says: "In Chicago, which is probably the most suitable opening for an Englishman, the diploma is simply produced before the State Board of Health. Chicago is increasing in population more rapidly than any other city in the States. It now stands second. The States present a very wide field, and it would be no easy matter to predict success or failure in a given instance. A good deal of local prejudice exists against foreigners. They prefer the home-made article, even if inferior. The sanitary laws are enforced very strictly at New York, especially the notification of infectious diseases. The profession, as almost everywhere, is overstocked; but it will be said, 'there is always room at the top.' A polyglot dictionary would not be a bad investment to start with. I am not joking. I have had Greeks, Poles, Russians, Armenians, Hungarians, Chinese, Italians, and Dutch patients. Some speak a little English, but the greater part of the conversation was carried on by signs or through interpreters who knew little more than the patients themselves. The fees depend on the class of the *clientèle*. Workingmen pay a dollar per visit, and the same for advice and prescription; small shopkeepers, etc., two dollars, and so on upward. Midwifery from ten to twenty dollars and upward, according to class. Medical men never do their own dispensing unless in the backwoods. The chemists in Pennsylvania are well qualified, many being Doctors of Pharmacy. All government appointments—such as coroner, medical officer of health, etc., are open to citizens only, but a foreigner may, of course, act as surgeon to Odd-Fellows, Foresters, or any private clubs. Practices are rarely bought or sold as in England. Beware of them as an investment. A practitioner usually starts on his own account, 'hangs out his sign,' as the local phraseology goes, or he may occasionally obtain an assistancy to an older man. Assistantships are difficult to secure, because local men 'know the ropes' better and are accordingly more sought after. A surgeon in the army or navy becomes *ipso facto* a citizen. I fear my communication grows lengthy, so I shall conclude by saying that the prospects of most men with British qualifications would probably be better in a British colony, although I am personally acquainted with four such in New York City (two being hospital surgeons) who have done well; but I am convinced they would have done equally well, if not better, in any English or Australian town presenting sufficient scope."

If the esteemed correspondent were writing about Irishmen or Germans, he would have a different story to tell. At any rate, gentlemen from these countries come here in great numbers and appear to thrive. Most Americans welcome Englishmen heartily, particularly if they are willing to adapt themselves to the country.

Ichthyol in Sore Nipples.—Dr. Oehren recommends ichthyol in the treatment of sore nipples. He uses the following formula:

℞. Ichthyol ..... ʒ j.
Lanolin,
Glycerin ..... āā ʒ j½.
Olive oil ..... ʒ ijss.

He claims that the advantages of this salve are as follows: One application causes the pains to disappear, the fissures quickly heal without it being necessary to wean the child or to use a protective cap. The consistence of the ointment is such that it is easily washed off after being applied, and at the same time the salve contains nothing that will harm the child.—*Therapeutische Monatshefte.*

Otoscleronectomy in Chronic Aural Catarrh.—Otoscleronectomy (οὖς, ὠτός, ear, σκληρός, hard, ἐκτομή, excision) is a new coinage designed to express the surgical removal of a part or all of the sclerosed and anchylosed conductors of sound in chronic catarrhal otitis media. As this operation has for its object the relief of tinnitus, deafness, and aural vertigo, more interest surrounds it than environs "otonecronectomy," or the excision and removal of the necrotin conductors of sound in chronic purulent otitis media. This interest is due to the fact that there are more cases of chronic catarrhal deafness than of chronic purulent otitis media seeking relief, and also because "otonecronectomy" is but following out an ordinary surgical indication, and requires no discussion. Though the earliest attempts at "otoscleronectomy" were made in Europe, the elaboration and signally good results of this operation are due to the acumen, industry, and boldness of American aurists displayed within the past decade. The great advance in aural surgery is the direct outcome of the enthusiastic and patient labor of a few men devoted solely to otology, untrammelled by any other special work. The pioneer work in the field of surgery performed by Sexton, of New York, and Burnett, of Philadelphia, has led naturally to the recent modified operation of Jack, of Boston, viz., the removal of the stapes only. These operations have proved beyond all cavil that the sound-conductors, namely, the membrana tympani and the three ossicles, can be removed, not only without any bad results to the patient, but with benefit to all the symptoms of chronic aural catarrh. Judging by past experience, the relief to deafness, tinnitus aurium, and aural vertigo is permanent, with the exception, perhaps, of a very small number of cases in which the indications were obscure—an incident common to all surgical procedures.

From the experiments of Sir Astley Cooper down, it has been observed that, generally, the good effects obtained by excision of part or of all of the membrana were lost, so far as *hearing* is concerned, by the reproduction of the drumhead. What changes of opinion in this regard may be brought about by the removal of the incus and stapes, or the stapes only, the membrana being allowed to remain *in situ*, is not yet known. Good results, however, have attended all of these modifications of otoscleronectomy.

The importance of any harmless operation that can be applied with reasonable assurance of relief in these hitherto hopeless cases of chronic catarrhal deafness, noises in the ear, and ear vertigo, cannot be over-estimated.—*Medical News.*

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Original Articles.

A NEW AND SAFE METHOD OF CUTTING ŒSOPHAGEAL STRICTURES.[1]

BY ROBERT ABBE, M.D.,

NEW YORK.

MY remarks this evening will have to do with one of the varieties of stricture of the œsophagus that has always taxed the skill of the surgeon to safely remedy, and usually has baffled him, namely, the dense cicatricial contraction following burning of the canal by caustics or acids.

Within a few weeks after the accident a rather rapid narrowing of the canal ensues at one or several points, and sometimes over quite a length of the œsophagus, the favorite sites being at the upper and lower segments. The caustic, it would seem, is often arrested by œsophageal spasm near the cardiac orifice and there produces its destructive work.

In the great majority of patients who have been the victims of this accident, the inability to swallow does not come for many weeks, as the stricture is not tight enough to be a complete barrier; hence the dilatation treatment is not carried on earlier, and the patients present themselves six months or a year after the accident, when they have become emaciated and reduced to fluid diet. It is then that the surgeon finds himself forced to deal with a very tight stricture, the treatment of which by dilatation with small-pointed bougies is often not only a matter of extreme difficulty but fraught with grave danger of rupture through the soft and dilated wall of the tube above the site of trouble.

More than that, there soon comes a time when many of the strictures will allow a moderate quantity of milk to pass through, but are utterly impassable to even the smallest whalebone bougie. In the care of these cases the surgeon now has to resort to one of three methods: Either, 1, opening the œsophagus in the neck, when the stricture happens to be in the upper part, and splitting the dense cicatricial tissue, as one would split a urethral stricture deep in the perineum; or, 2, dividing the stricture within the œsophagus by passing a concealed knife on a flexible stem from the mouth down to the trouble, and doing internal œsophagotomy; or, 3, opening the stomach and passing upward either bougies to dilate or a knife to cut the obstruction.

The first method—external œsophagotomy—can apply only to the unusual cases of strictures high up in the neck. It is a comparatively safe and not a difficult operation, inasmuch as the tissues to be cut are under the operator's eye, and vital parts are not likely to be injured. (Billroth's method.)

The second, or internal œsophagotomy, is universally admitted to be much more dangerous—and rightly so. The œsophagus is in the closest proximity to the aorta, the trachea, the thyroid artery, the recurrent laryngeal nerve, and many large veins. The exact thickness of the dense stricture cannot be calculated, and a knife which may be exposed to cut only two millimetres may even, thereby, cut through to the cellular layer outside the tube and divide one of the vital parts just mentioned.

Albert, in his latest work, says: "Internal œsophagotomy is a method which has caused the designing of many instruments, of which one can say that the operator never knows just what he has cut with them when he uses them."

"A few cases of lucky accident where the patient escapes alive—no one knows how—should not mislead us, or encourage us to employ a method which in grave cases is not easily calculable in milder ones superfluous, and in all supplanted by the safer methods of external œsophagotomy or gastrostomy."

The patients who have been saved from starvation by establishing a permanent opening into the stomach for introduction of food are now numbered by scores.

It remained for Albert to do the first case of dilatation of the œsophageal stricture through the stomach and save his patient, the gastric fistula afterward healing spontaneously. This was one of the cases of strictures, impermeable from above, in which after a while he could pass a stiff catgut from below and successively larger bougies till the dilatation permitted swallowing food.

Bergmann afterward did the same and closed the gastric fistula by a plastic operation. Maydl went one step further and passed a thread through, to which he attached larger and larger bougies and drew them up.

From accumulated experience it now seems probable that in the majority of œsophageal strictures, low down, which will not admit of even the smallest bougie entering from above, it is possible to enter the opening from below through a gastric incision. This is due to the fact that the œsophagus above the narrow stricture has become dilated by reason of the constant weight of food pressing to get through it and has ceased to be funnel-shaped enough to direct the bougie aright; while viewed from below the canal still keeps a perfectly narrow inverted funnel-shape.

Even if one can cause a fine bougie to enter, it is not

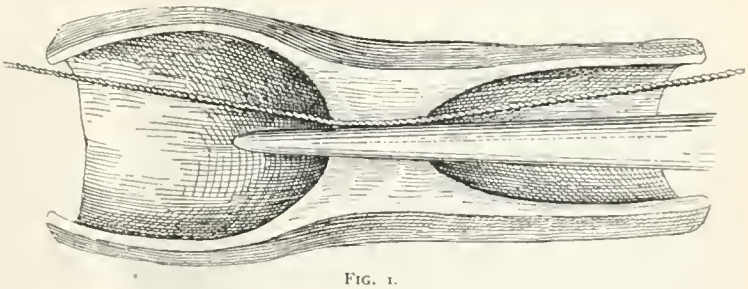

FIG. 1.

practical or safe to stretch many of the dense diseased strictures, even by the approach through the stomach, and one must leave the patient to nourish permanently through the gastric fistula or try the dangerous cutting internally. Konig says that the fistula is better than to resort to the dangerous and bloody internal œsophagotomy, even though Braun and some French surgeons advocate the latter. He quotes Gussenbauer as having cut a deep stricture, after passing an instrument into an œsophageal wound in the neck, and cutting to the right and left, and then dilating. Many operators have since been able to dilate yielding strictures from the stomach opening.

It is to obviate the risks of cutting internally in tough and extensive strictures that I have devised and used the method which I now speak of, namely, cutting with a string—the tissues made tense by dilating with a bougie at the time. The principle involved is a commonly experienced one, that even a blunt object like a string, if

[1] Read before the New York Clinical Society.

drawn across a tense tissue (the web between the fingers for instance) will cause a cut to occur which would not take place if the tissue were flabby. Hence the self-limited division of the stricture goes on only so long as the bougie maintains local tension at the site of stricture.

Experience has shown, in the case now cited, that when the dilatation had been carried to its utmost limit by a small conical bougie, a string previously passed through the stricture being drawn back and forth, the dilating bougie could be rapidly advanced where before it had come to a standstill, in spite of any legitimate force that had been used. This advance was made with the loss of only a few drops of blood, and by such rapid strides that only four bougies were needed to enlarge it from the size of the smallest to one as large as the normal œsophagus would bear.

The case on which this method has succeeded so well is as follows:

Miss M. F——, aged thirty, swallowed half a glass of strongest ammonia three years ago. During the next year the usual signs of stricture of the œsophagus ensued, with emaciation, reducing her from 150 pounds to 100 pounds in weight. She became unable to swallow any but liquid diet, and put herself under the care of my partner, Dr. Arthur L. Fisk, who tried in vain to pass any form of bougie through the stricture.

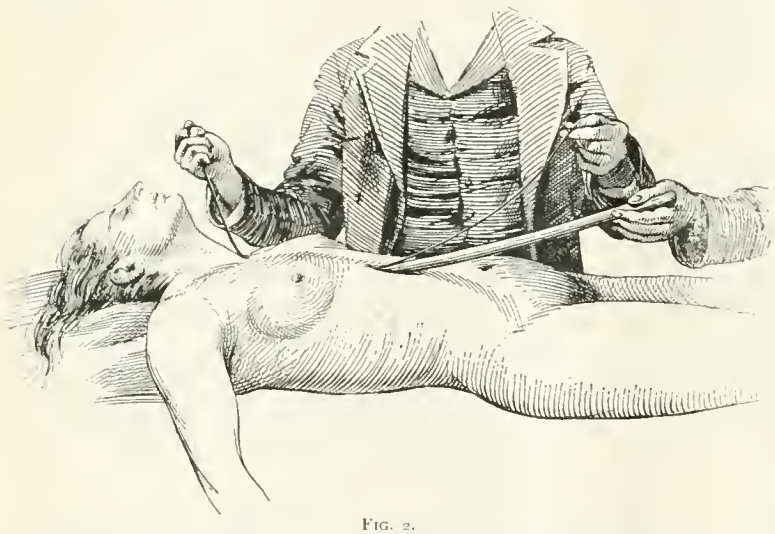

Fig. 2.

The obstruction was thirteen and one-half inches from her teeth. From the behavior of swallowed food regurgitating there was every reason to believe there was a considerable pouching of the tube above the stricture. Dr. Fisk kindly transferred her to my service at St. Luke's Hospital, where I operated four days later, December 9, 1892, believing I might possibly do an internal dilatation or œsophagotomy through an opening in the neck. I tried this first, but was utterly unable to pass any instrument through the obstruction, which was five inches below the wound. I then made the usual gastrostomy incision, stitched the stomach to the abdominal wall, and at once opened it. My finger could be passed through this into the cardiac orifice of the œsophagus, and guided thereby I passed a very small conical gum elastic bougie upward with some force, and to its end I secured a piece of heavy braided silk; this I drew out through the wound in the neck. The stricture was extremely dense, and I judged about an inch in length, its lower end two and one-half inches from the stomach. With the thread as a guide, I now endeavored to proceed with dilatation, but found the obstruction too firm to yield. The œsophagus was pushed up by the force, and it seemed as if to use more would tear it across and cause grave damage to its walls. With the conical end of the bougie tightly wedged in the stricture, it occurred to me to assist by pulling the string upward at the neck, then the stricture was felt to yield and the dilator advanced through the mass. Three large bougies were passed consecutively, and each was tightly crowded in while the string was see-sawed back and forth. Thus the stretching was kept at its maximum, and the bougies passed with remarkable ease the entire length of the œsophagus. The bleeding was practically insignificant. I am perfectly certain that except for this device the stricture could not have been relieved. I made several prior attempts to introduce œsophagotomes, and even the Otis urethrotome, through the stricture from the stomach, but was unable to do so. The patient experienced little or no shock from the operation, and subsequently had almost no fever.

After the dilatation I drew up into the œsophagus to a point higher than the stricture a rubber tube the size of one's finger, and left it *in situ*, the lower end coming out of the gastrostomy wound, thus giving the patient a chance to frequently rinse her mouth and throat with ice-water, which, when she swallowed, poured out of the tube below.

Nutritious food was meanwhile regularly placed in the stomach by another tube. Uninterrupted recovery ensued.

At the end of a week I again etherized her and repeated the free dilatation, the string serving to assist a still larger bougie to pass as readily as before.

This has since been passed without anæsthesia from the mouth to the stomach, and the string has been permanently removed.

N. B.—The œsophageal fistula in the neck closed spontaneously in two weeks.

The gastric fistula was secured against leakage by a von Hacker's double rubber balloon and the patient allowed to eat everything. She had no difficulty in swallowing raw oysters, meat, vegetables, as naturally as ever, for the first time in four years.

She gained four and a half pounds a week. Eight weeks after the gastrostomy, I operated to close the fistula.

The stomach was dissected from the abdominal wall. The fistulous aperture, nearly two inches in length, was inverted and secured by a first row of continuous Lembert suture of fine silk and one of Halsted's interrupted quilted suture outside of this. This was dropped into the abdomen and the external wound closed with silkworm-gut. Her convalescence was perfect. The largest bougie now passes down the œsophagus with perfect freedom, and its use will be continued for a year or two by the patient.

To sum up, the operation for impermeable or very tight œsophageal stricture is best undertaken as follows: Gastrostomy is done by the oblique incision along the margin of the costal cartilages. Digital examination of the œsophageal orifice is made and a small conical gum elastic bougie guided into it by the finger. If dilatation is easy larger bougies are to be used, but if resistance is great, force is dangerous. The smallest bougie is then to be made to carry a heavy-braided ligature silk from the stomach to the mouth. A larger bougie is now passed from the stomach alongside the string, and pressed tightly into the stricture so as to stretch it. The string is now drawn upward by the fingers introduced well back in the mouth, and the bougie will be felt to advance at once as the string wears away the tense stricture. Larger bougies are now pressed in and the string see-sawed back and forth. When the largest size has been attained a corresponding rubber tube is drawn up the œsophagus past the point of stricture, its lower end remaining outside the stomach wound. A smaller tube is introduced into the stomach for nourishment. The patient can thus drink water for refreshing the mouth, or swallow saliva without contaminating the wounded surface which the tube also serves to keep dilated. The large tube may be removed the second or third day, and dilating bougies introduced from the mouth after the fourth day. The gastrostomy wound may be closed, whenever the patient has gained strength, by a plastic operation.

OBSERVATIONS ON FRACTURE OF THE NECK OF THE FEMUR IN CHILDHOOD,

With Especial Reference to Treatment and Differential Diagnosis from Separation of the Epiphysis.

By ROYAL WHITMAN, M.D., M.R.C.S.,

NEW YORK.

It is sufficiently well established by recorded cases that the hip may be injured in childhood, and that shortening and disability may follow, which can only be explained by fracture or displacement in or about the hip-joint.

This injury may be classed, in most instances, as either fracture of the neck of the femur, or separation of the epiphysis. The latter is assumed by most writers to be the probable diagnosis, on the ground that an epiphysis existing, its displacement is more probable than fracture of bone. Indeed, it seems a very general impression that an epiphysis is a portion of bone adhering to another portion in such a manner that its disjunction may, and usually does take place from a much less amount of force than would be necessary to fracture the bone itself.

Thus a number of cases of supposed separation of the epiphysis of the head of the femur are recorded, and are copied from one work on fractures to another, in most of which the diagnosis was made, to my mind, on most inconclusive evidence.

Two years ago I reported a case of fracture of the neck of the femur in a child, and presented the patient at the meeting of the orthopedic section of the Academy; since then, several similar cases have come under observation, which have confirmed me in the belief that this fracture may occur in childhood, and that it is the more probable injury in these cases in which diagnosis is difficult: I propose, therefore, to present the question of fracture *versus* separation of the epiphysis, and to show several patients in whom the history and present appearances seem to bear out this conclusion, in the hope that members of the section may confirm the diagnosis, or point out the errors in reasoning by which it was made.

It may at once be stated that both accidents may occur, as proven by actual observation. A specimen of separation of the epiphysis was presented by Bousseau, at a meeting of the Anatomical Society of Paris, and is published with an illustration in the report of the society.[2]

The case is as follows: "A girl of fourteen was run over by a heavy carriage, was taken to the Hospital St. Louis in an unconscious condition. The left hip and thigh were much swollen and ecchymosed, the left leg everted and shortened, so that the heel was on a level with the opposite malleolus. Later, on regaining consciousness, voluntary movement of the limb was impossible. The girl died during the night, and examination showed the muscles about the hip reduced to a pulp, infiltrated with coagulated blood, a complete separation at the epiphyseal junction, rupture of the capsule, and upward displacement of the neck of the femur. In addition both spines of the ilium were separated, the subperitoneal tissue of the iliac fossa filled with blood, and the left humerus fractured."

A case of fracture of the neck of the femur is reported by Schultz,[3] from the practice of Dr. Hoffa, who removed the head of the femur in a girl of fourteen, for ununited fracture six weeks after the occurrence of the injury from a fall. A similar case is reported by Hamilton.[4]

A girl of sixteen was caught between the wheels of two carriages, and sustained an injury to the hip. Autopsy three years later showed ununited intracapsular fracture of the neck of the femur.

Fractures of the neck of the femur produced by violence, in the attempt to replace dorsal dislocations of the hip in childhood, are reported by Cooper and Leisrink, and such an instance has come under my own observation, as I was present at an operation when, in the attempt to reduce, through open incision, an anterior dislocation of the femur, the result of an acute arthritis in a boy of six, the neck was broken at its junction with the shaft, although the previous disease, by which the cartilage was partially destroyed, should have made separation of the epiphysis the more probable accident, if it is true that this more readily occurs than fracture. Aside from proving that both injuries may occur, these observations are of little aid in diagnosis in a class of cases presenting quite other appearances and symptoms. Neither do the experimental studies on separation of the epiphyses on the bodies of infants or older children, or on living animals, aid to any extent in settling the question. In one respect, the experimenters agree: that separation is difficult, that it may be most easily produced in hinge-joints, by extreme over-extension, and in ball-and-socket joints, by abduction.

These experiments on infants are of no value in the question under consideration, because the epiphysis of the head of the femur does not exist, the entire upper extremity of the bone, including the neck and trochanter, are cartilaginous at birth, ossification beginning in the epiphysis of the head at about the first year.

Bruns[1] has collected from literature one hundred undoubted cases of separation of the epiphyses, selecting those only in which the diagnosis was proven by examination after death, by resection, or by penetrating wounds. Of these one hundred cases, but one is recorded of separation of the ephiphysis of the head of the femur, that already mentioned. The cases were divided as follows:

Upper epiphysis of the humerus	11
Lower epiphysis of the humerus	4
Upper epiphysis of the ulnar	1
Lower epiphysis of the ulnar	2
Lower epiphysis of the radius	25
Ossa pelvis	3
Upper epiphysis of the femur	1
Great trochanter	1
Lower epiphysis of the femur	28
Upper epiphysis of the tibia	4
Lower epiphysis of the tibia	11
Upper epiphysis of the fibula	3
Lower epiphysis of the fibula	4
Metatarsus	2
Total	100

Of the eleven cases of separation of the upper epiphysis of the humerus which offers some analogy to that of the femur, five were produced by intra-partem violence. With this exception, it is stated by Bruns that separation of the epiphyses is rare in the first ten years of childhood.

Although one may not attach great importance to statistics of this character, in deciding for or against the question under consideration, the fact that but one case of separation of the upper epiphysis of the femur is recorded in one hundred instances of separations in other localities, would seem to show that the accident is a rare one. It may be stated, then, of separation of epiphyses, that it is rare, compared with fracture: that its cause is usually a sudden twisting wrench or strain; it is most frequent in those situations where the epiphysis forms the entire extremity of the bone, so that great leverage may be exerted by means of ligaments and muscles attached near the line of junction, as in the lower extremity of the femur. Even in these localities, experiments on the dead body, and on animals, have shown that fracture is more common, although the force is exerted in the direction most favorable to attain this object.

The weight of evidence is thus against the assumption that separation of an epiphysis is more likely to occur as a result of violence than fracture. Of all the epiphyses in the body, that of the head of the femur, lying deep in the acetabulum, completely within the capsule, with a

[1] Read before the Surgical Section of the New York Academy of Medicine, December 12, 1892.

[2] Bulletin de la Societe Anatomique de Paris, April, 1867, p. 283.

[3] Zeitschrift für orthopädische Chirurgie, i., p. 49.

[4] Hamilton and Smith, Eighth edition, p. 369.

[1] Deutsche Chir., xxvii, p. 118; Archiv für klin. Chir., xxvii., p. 241.

wide range of motion in all directions, seems least liable to this injury, and this is borne out by the statistics quoted.

Holmes,[1] in considering injuries to the hip in children, says: "Fractures of the neck of the femur are hardly known in childhood, and the upper epiphysis of the femur is so small and so completely within the hip-joint that its disjunction is unknown, except perhaps in the fœtus."

In the reported cases of separation of the epiphysis of the upper extremity of the humerus, the only joint analogous to the head of the femur, the deformity was well marked, easily reduced, but difficult to retain in position, slow to unite, or remained ununited, while subsequent impairment of motion was the rule.

Hutchinson considers the result of non-union more

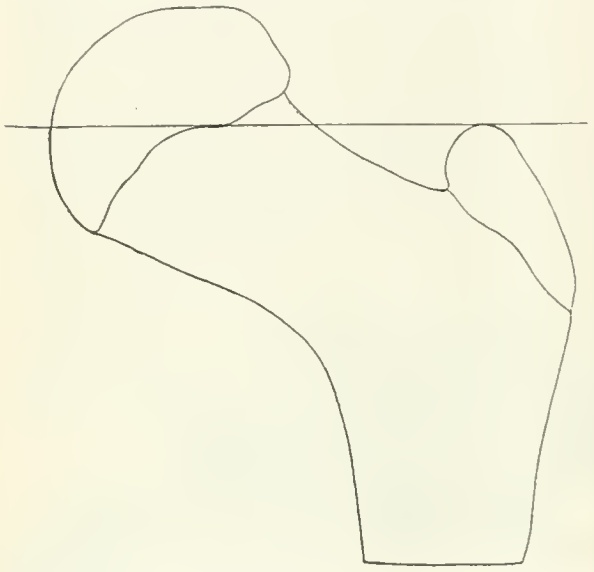

Fig. 1. (after Wolff)—Shows the epiphyses of the head and the trochanter; also the normal elevation of the head above the trochanter at the age of fourteen.

particularly in his article on separation of the upper epiphysis of the femur, in the *Archives of Surgery* for April, 1892, as follows:

"In the later stage of confirmed non-union, which, according to my experience, is that which most frequently comes under notice, the symptoms are those of unreduced dislocation on the dorsum, but with very free mobility, and inability to find the rounded head of the bone." In the child, the neck of the femur projecting from the shaft at an angle of 129° (*vide* Fig. 1) expands at the epiphyseal junction. This junction is further assured by a thick external sheath of cartilage, which persists for many years after birth, and by the periosteum, which is here, as in other situations, thicker than elsewhere, so that when separation takes place it is stripped from the bone for a considerable distance.

Admitting, then, as experiments prove, that fracture more readily occurs than separation, even in the most favorable localities, it is evident that this epiphyseal junction, which is broader and stronger than the neck, completely within the capsule, firmly held in place by muscles, the cotyloid, and other ligaments, and by atmospheric pressure, is likely to be separated only by great violence; that the separation is likely to be complete, and accompanied by rupture of the capsule, and displacement. If separation has occurred, three terminations seem possible:

1. Complete upward displacement of the neck, non-union of the fragments, with a final result, as in Hutchinson's cases, similar to those which are occasionally seen after acute epiphysitis, that is, a condition simulating congenital dislocation of the hip.

2. Irregular junction of fragments, with subsequent impairment of function of the joint, similar to the results reported after displacement of the upper epiphysis of the humerus.

3. Immediate replacement of fragments, with complete recovery without loss of function or shortening.

If, then, a patient be presented for examination, some weeks or months after an injury to the hip—in other words, before nature has, by developmental changes, accommodated herself to the changed conditions—and examination shows three-fourths of an inch shortening, and a corresponding elevation of the trochanter, with motion free in all directions, without deformity of the limb, one is justified in assuming that the head of the bone is in normal relation to the acetabulum, and that the shortening is caused by bending or united fracture, sufficiently far away from the articulating surfaces as to cause no interference with the function of the joint. This may be assumed on the following grounds: The length of the articulating junction between the epiphysis and the neck varies, according to the age and size of the child, from three-fourths to one and one-fourth inch or more. Upward displacement of three-fourths of an inch would either completely separate the fragments or allow but one-fourth or one-half an inch of apposing surfaces (*vide* Fig. 2). Under these circumstances, if union followed, it must be an irregular one, and it would seem, too, that the projecting neck must impinge on the rim of the acetabulum, and that in any case the function of the joint must be embarrassed by the misplacement. With these preliminary remarks, the histories of five patients treated, and the patients themselves are now presented for your consideration.

Case I.—A boy aged eight, was brought to the hospital in the arms of his mother, on May 20, 1890. Six weeks before, he had fallen into an area, a distance of fourteen feet, injuring the right leg. He was put to bed and treated by a physician, who devoted his attention to the knee, which was said to have been swollen. Later, another physician was called, who pronounced the condition hip disease, and said that it was incurable.

On examination, it was noted that the leg was rotated outward, that the trochanter was elevated three-fourths of an inch above Nélaton's line, and somewhat nearer the

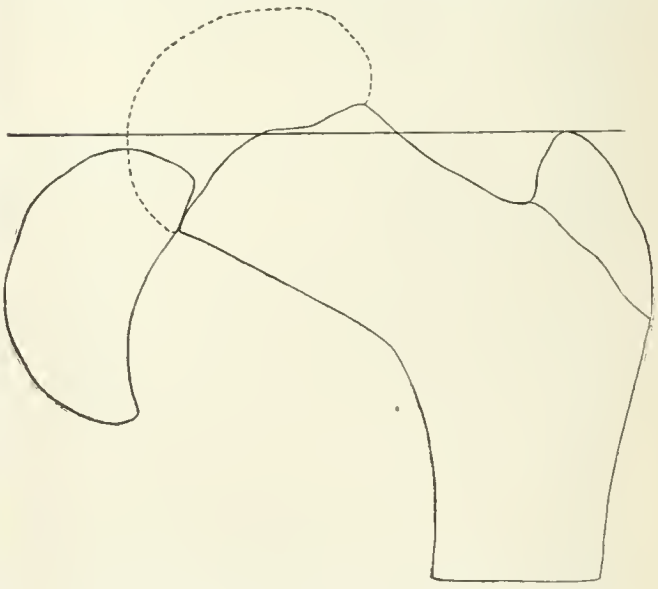

Fig. 2.—A scheme to represent disjunction of the epiphysis and to show the separation necessary to explain an elevation of the trochanter of three-fourths of an inch above Nélaton's line, as in the cases reported.

median line of the body than its fellow. Passive motion of the limb was slightly painful, but free, except in extreme flexion and inward rotation. The head of the bone was evidently firmly in its place. A hip-splint was applied, on which the child immediately began to walk. Six months later it was discarded. Examination two years later, October 20, 1892, showed practically free motion in all directions. It was said that the child com-

[1] Diseases of Childhood, second edition, p. 258.

plained somewhat of stiffness after long sitting. This was explained by the marked projection of the trochanter, which distended the gluteal region when the leg was flexed. Otherwise the child suffered no discomfort. There was a slight limp and one inch shortening, an apparent increase of one-fourth of an inch since the first examination. The legs were three inches longer than in 1890.

Case II.—A boy, aged six, was brought on November 9, 1891, to the hospital, on account of a persistent limp. Four and a half months before, he had fallen from a fire-escape, a distance of fourteen feet, the accident being followed by swelling of the thigh, pain, and inability to stand. A plaster-of-Paris bandage was applied, and kept in position for eight weeks, on its removal he appeared well with the exception of the limp.

Examination showed, as in the preceding case, slight outward rotation of the limb, prominence of the trochanter, which was elevated three-fourths of an inch above Nélaton's line, with two-thirds of an inch displacement toward the median line. No limitation of motion, except to extreme flexion and inward rotation. A brace was worn for three months, and then removed. The child was examined on December 10, 1892, one year later. The shortening was then one and one-fourth inch, the other leg having increased one and one-half inch in length. The only symptoms remaining were the limp caused by shortening, and a slight limitation of motion. I am unable to say whether the increase of one-half inch in shortening is due to retarded growth or to further bending of the neck.

Case III.—A boy, aged five, was brought to the hospital December 28, 1891, and was said to have been knocked down or run over by a heavy carriage, nine weeks before. At this time there was pain and swelling of the thigh, for which a plaster bandage was applied; it was removed two weeks later. The patient had since walked with marked limp, and suffered more or less pain. Examination showed the leg, in full extension, somewhat rotated outward, three-fourths of an inch shorter than its fellow, with a corresponding elevation of the trochanter, which was, however, much less prominent than in the preceding cases; motion was much more limited, terminating at one hundred degrees of flexion, and the muscular resistance was more marked. In this case, it was inferred that the upper extremity of the bone had sustained more damage than in the preceding cases; which was borne out by the after-history; the spasm and resistance to motion necessitating the use of a brace up to the present time, when it is being gradually discarded. There has been no change in the appearance; motion is now perfect in extension, somewhat limited in flexion. The relative shortening is as on the first examination.

Case IV.—A boy aged eight, applied at the hospital October 8, 1892, with a history of a fall of about fifteen feet six months before, followed by pain and disability, for which he was treated at the Gouverneur Hospital. The appearance in this case was very similar to the preceding. The right trochanter was elevated one inch above Nélaton's line, there was marked thickening about the joint and muscular spasm on motion. The leg was fully extended, and rotated outward. Dr. Silver has kindly furnished me with the history of the case: On the child's admission to the hospital he was etherized, and a diagnosis of fracture of the neck of the femur, at its junction with the shaft, was made. There was distinct bony crepitus at this point, and the trochanter rotated on its own axis. At first Buck's extension was applied, but as the child was unruly, a plaster-of-Paris spica was substituted. On its removal the boy walked fairly well, but as the pain and limp had recurred since his removal from the hospital, some support was thought necessary. This, as in the preceding case, was applied and at once relieved the pain and night cry.

Case V.—A child, two and a half years of age, was brought for examination in October, 1892. One month before, it had fallen four stories, but did not appear to be seriously injured. It had since limped, and complained of pain and fatigue in the left leg. Examination showed outward rotation, but absolutely free motion of the hip, three-fourths of an inch shortening, with the elevated and prominent trochanter as in the former cases. No pain or spasm. A modified hip-splint, with joints, was applied and has since been worn, with relief of all the symptoms.

It will be noted that these histories are very much alike, that the injuries were caused by falls, that the shortening was about three-fourths of an inch, that the movements of the hip were free and perfect until checked by muscular spasm, or pain; which may be assumed to be the result of the thickening and infiltration caused by the fracture. Thus the accident was the result of violence, which might cause fracture; the subsequent symptoms were those of fracture, and I find no evidence in the literature of the subject or in the appearance of the patients, which opposes a diagnosis of fracture.

There are no reported cases of fracture at this age available for comparison, and I have not thought it necessary to collect cases of supposed separation of the epiphysis of the femur to criticise the diagnosis. As a rule, the descriptions are defective and after-histories not given. I have therefore confined myself to a consideration of cases examined and treated by myself; three of them having been followed to final results. These five patients have been presented for observation and comment. The criticism may be justly made that these cases are inconclusive, and that diagnosis is impossible in parts so deeply seated. Granting this, one is obliged to accept

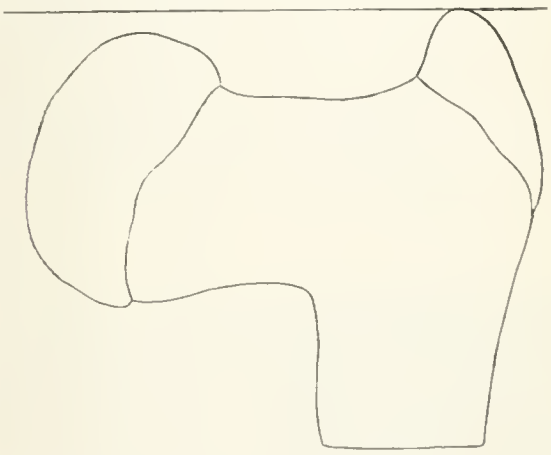

Fig. 3.—A Scheme to Represent the Change in the Angle of the Neck after Fracture, to Explain an Elevation of Three-fourths of an Inch above Nélaton's Line.

a probable diagnosis, and my reasons have been presented in support of the belief that it is in these cases fracture, rather than separation of the epiphysis, and that fracture in similar cases is the more probable accident of the two.

From the rapidity with which recovery took place, in three of the patients it has seemed to me probable that the fracture of the neck might have been partial, a bending and fracture, or an impaction rather than complete separation (*vide* Fig. 3). The history of the patients would also seem to show that the immediate treatment of the injury had but little influence on the final result. In all, union promptly took place, and in all, the present disability depends upon the shortening. As it may be assumed that there is practically no danger of non-union in disjunction of the epiphysis, or fracture, unless the fragments are completely separated from one another, the first essential in immediate treatment should be to overcome the evident shortening of the limb, even if this necessitates a breaking up of an impaction, in order that the parts may be placed in as nearly as possible a normal relation to one another. For it must be remembered that the neck is so short that the fracture must be in close relation to the epiphysis, and that cessation of growth is likely to follow great deformity or exuberant callus, and that non-union may result from complete separation of the fragments.

To hold the parts in apposition, extension with direct counter-extension on the perineum would seem necessary. For this purpose a modified Thomas hip-splint suggests itself. It should be double, provided with a pelvic band for perineal straps, and lengthened to project beyond the foot to provide for extension. If such an appliance were not available, a plaster bandage, including the body and foot, applied during etherization, under extension and counter-extension, the leg being slightly abducted, might prove equally efficacious.

The interesting feature in the after-treatment of these cases has been the immediate relief of pain and disability following the application of the ordinary hip-splint, by which the vulnerable joint was protected from traumatism. The question also arises whether an increased bending of the neck, at the seat of fracture, may not result from a too early use of the limb. This bending occasionally occurs from rachitis in adolescence, resulting in great deformity, and the point seems worthy of attention (*vide* Fig. 4). This appliance would doubtless be serviceable in shortening the period of weakness and discomfort after similar injuries in the adult, as is illustrated by the following case:

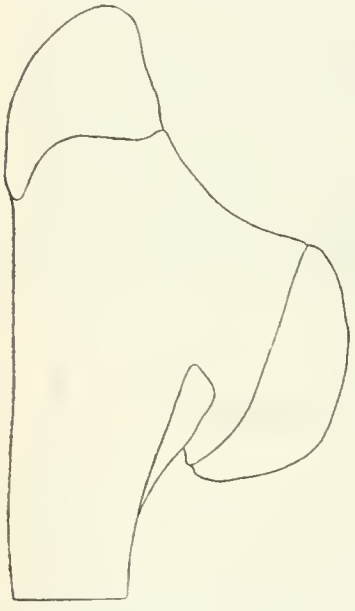

FIG. 4.—Rachitic Bending of the Neck of the Femur (after Schultz). In this case the trochanter was two inches above Nélaton's Line. The specimen was obtained by resection.

References.— Ueber die Verbiegung des Scheokelhalses im Wachsthumsalter; Ein neues Krankheitsbild. Dr. Ernst Müller, Beiträge zur klinischeo Chirurgie. Bd. 4, S. 137. Bemerkungen zu dem Neigungswinkel des Schenkelhalses. C. Läuenstein, Archiv für klinische Chirurgie, Bd. 40, S. 244. Ein Fall von doppelseitiger rhachitischer Verbiegung des Schenkelhalses. Joseph Rotter. Münchener klinische Wochenschrift, August, 1890, No. 32, S. 547. Zur Casuistik der Verbiegungen des Schenkelhalses. Julius Schultz, Zeitschrift für Orthopädische Chirurgie, vol. i., S. 55.

A man, thirty-five years of age, was carried into the outdoor department of the Hospital for Ruptured and Crippled, in the arms of a friend, eight months after fracture at the hip, weakness and pain preventing the use of the limb.

As the patient was subject to a recurrent dislocation of the shoulder on the same side, which the pressure of a crutch displaced, he was bed-ridden. Two weeks after the application of the hip-splint he came from Brooklyn, unattended, walking without difficulty or pain.

In conclusion, I think it may be stated, that under normal conditions, the epiphyseal junction is not a weak point in the continuity of bone. That, as a result of violence, fracture may occur above, below, or through the line of cartilage. Such fractures or displacements are of especial importance, because of the vicinity of the joint, because of the difficulty in keeping the fragments in apposition, and because cessation or diminution of growth or non-union may result.

Finally, I may call your attention to the fact that the oldest of the patients presented is but eight years of age, that the first decennium is a period when either fracture or separation of the epiphysis is said to be extremely uncommon. If, then, five cases were seen at the Hospital for Ruptured and Crippled in a period of two years, it is probable that the accident is much more common than statistics would lead one to suppose.

University of Coimbra.—The total number of students in the Medical Faculty of the University of Coimbra, Portugal, entered for the present academic year, is 141. Of these, 42 are first year, 17 second, 27 third, 25 fourth, and 30 fifth year students.

INTESTINAL ANTISEPSIS IN TYPHOID FEVER.

By J. FULTON PURDOM, M.D.,

LOUISVILLE, KY.

In the MEDICAL RECORD of January 7, 1893, under the title "Failures in Internal Antisepsis," I notice some comment on the use of antiseptic remedies in typhoid fever which awakens in me a desire to say a few words on the subject through the columns of the same journal. In the first place, no sane man will now deny that typhoid fever is due to a specific micro-organism: and in the second place, in the light of scientific investigation, no man can afford to say that the bacillus is the only factor at work in the production of the various symptoms and pathological changes that occur during the progress of the case.

If investigation has made any one thing in morbid anatomy conclusive, it is that the intestinal lesions is the only morbid anatomy in typhoid fever characteristic of the disease.

It was not strange that a learned and eminent professor a few years ago was evasive when the student asked him why all people who have typhoid fever have lesions of the glands of the small intestine? His answer was, It is the characteristic of the disease. The student, disappointed, left the professor, and asked himself the question, Why are the characteristic lesions limited to the glands in the small intestine? If we consult the text-books, the question remains unanswered; but if we turn to the pathology of the disease and look at it from a biological standpoint, endeavoring to follow the etiological factors through the pathological process by which they produce morbid anatomy, the question finds a solution in a common sense way, sustained by scientific principles. Any pathological condition which sustains so constant and characteristic a relation to a disease as the infiltration and disintegration of Peyer's patches do to typhoid fever, must be admitted to be due to the action of the same specific element as an etiological factor in every case of the disease of which the lesion is a characteristic. Also, if the pathological changes which occur in other portions of the body were due to the action of the same specific element—the bacillus—those lesions would necessarily be characteristic as well; but no man claims characteristic pathological changes in typhoid fever outside of the glands of the small intestine.

It follows as a logical conclusion that, if the lesions in the intestinal glands stand alone as characteristic of typhoid fever, then no other lesions are due to the unmodified action of the bacillus. I think it will hold good as an unchangeable law in biology, that, as a result of the growth of all disease-producing micro-organisms, there is necessarily a product formed, variously styled ptomaïne, toxine, etc., which product or toxine is in all instances a diffusible substance, and becomes a second factor of much importance in producing the pathological changes which occur. In using the term pathology, the writer hopes to be understood as referring to the process by which the etiological factors produce the pathological changes which result in morbid anatomy.

We have, then, in typhoid fever, as the prime etiological factor, the bacillus, which furnishes a toxine as a result of its growth; the toxine constituting a second factor in the etiology of the disease. Now we shall be able to understand the pathology of the disease just in proportion as we understand and discriminate the action of the bacillus in contradistinction to the action of the toxine, appreciating at the same time the pathological avenues that are being opened up by the bacilli and their toxine, through which the pus-producing cocci may enter as a complication, the action of which must then be discriminated from that of the specific bacillus or its toxine.

In order to follow the above suggestions we must first understand what is the action of the bacillus, and to determine that fact we must decide its point of entrance into the body, and what tissue constitutes its field of action in which is generated the diffusible toxine.

The writer feels that it would be presuming upon the

intelligence of his readers to do more than state the fact that the bacillus begins its work in the glands of the small intestine. While we admit the possibility of the bacilli being taken on to the fauces in the act of inspiration, yet we deny their ability to produce the disease except they be swallowed and find lodgement in the glands from the intestinal canal, and not from the blood. That the typhoid bacillus is the active agent in producing the lesions in Peyer's patches is admitted, perhaps without a dissenting voice: but with reference to the part played by the bacilli after the intestinal glands are infected, there is perhaps a difference of opinion; but suffice it to say that, when one or more of the glands of the small intestine are infected by typhoid bacilli the patient has typhoid fever.

In those glands we have an infiltrated disintegration which is entirely due to the direct action of the bacilli. This cheesy degeneration is non-suppurative in character, until we have engrafted thereon the action of the pus-producing cocci, some of which are ever present in the intestinal canal.

In so far as relates to the action of the specific bacillus, typhoid fever is purely a local disease. The bacilli infiltrate the intestinal glands, and by their growth furnish a toxine which is absorbed, to the action of which is due all the systemic symptoms prior to disintegration in the glands. After this we have the action of the various pus-producing micrococci engrafted upon the local action of the specific bacillus, which not only increases the local lesions, but adds other poisons by absorption to the system which is already laboring under a greater or less degree of saturation by the poisonous toxine which has been set free by the growth of the specific bacilli.

We are aware of the fact that it is a common occurrence for the scientist to find the typhoid bacilli in the spleen and various other portions of the body, but the fact that the characteristic lesions of the intestinal glands are admitted to be due to the action of the specific bacillus, we are forced to the conclusion that the bacilli found elsewhere in the body are carried by the lymphatics just as other detritus or products of suppuration; for the scientists find other micro-organisms throughout the body which they admit have entered the lymph-channels from the ulcers in the bowel. Again, in support of the statement that the action of the bacillus is local, we must remember the failures of the scientists to produce the disease by inoculation; and the self-limitation of the disease finds no possible explanation so reasonable as that the disease can exist as typhoid fever only so long as is required for the bacilli to consume the tissue in the glands infected, relapses being due to the invasion of other glands that were not infected in the primary attack; also, it is now accepted by all men everywhere that the only source of infection from the patient is in the alvine discharges. As before stated, the action of the bacilli does not produce suppuration, consequently ulceration that produces perforation and hemorrhage is due to the action of other micrococci which attack the local lesions when the specific bacilli have so lowered the vitality of the tissue that nature is no longer able at those points to resist the action of the bacteria of suppuration. As already mentioned, the products of suppuration and of disintegrated tissue are taken into the circulation and through the lymphatics, along with which are carried many of the pus-producing germs which, in many cases, find lodgement in some remote gland or other tissue of the body and produce pus-formation, because of the lowered vitality of the phagocytes as a result of the action of the toxine which has been acting upon every tissue of the body since the beginning of its formation.

The toxine being a very diffusible substance, it is immediately transmitted through the entire circulation so soon as it is generated by the growth of the bacilli.

The nervous centres being more susceptible to the action of poisons circulating in the blood, they are first affected by the toxine, and through the nervous system we have every function of the body disturbed.

Resulting from the action of the toxine on the nervous centres and disturbance of all the functions of the body, we soon have added thereto pathological secretion and hindered excretion; then, slowly at first but surely, come the products of tissue waste, resulting from more or less rapid emaciation, with the absorption of the products of disintegration and suppuration from the local lesions in the bowel. With such a condition it is certainly not strange that the heat-regulating centre is unbalanced.

The pathological processes here outlined constitute a fair index to the clinical history. This view of the subject, to the mind of the writer, furnishes a scientific basis for rational treatment.

There has been much said in favor of the bath treatment, and yet every gentleman of a fair amount of intelligence must admit that the cold-bath treatment is empirical in the full sense of the term, for a man's common sense must necessarily teach him that the application of cold water cannot affect the specific bacillus.

The bath treatment was first used to lower temperature, but observation taught men that when the patient reacted well from the bath, it also had a stimulating effect, through its action on the nerve periphery, by which it was supposed to increase the elimination of poisonous products from the blood, enabling the patient to nourish better, and altogether sustaining vitality, thereby increasing the patient's chances to outlive the disease.

Nothing more can be claimed for the bath treatment now.

This is all very well in its place as an empiricism, but it is like massage and the application of liniment to cure rheumatism, it never touches the specific cause of the disease.

The internal administration of antipyretics is even less reliable; for while they lower the temperature, they do not always increase the elimination of poisonous products from the system, but they do generally depress the patient's vitality; antiseptics that are absorbed by the stomach never reach the bacillus, and for that reason should never be given except as they are required to improve the condition of the stomach for the digestion of nourishment.

As to the failures of internal antisepsis, as relates to typhoid fever: What purpose have men generally had in view when giving antiseptics? and how have they proceeded? If they have attempted to follow the bacillus through the circulation to the lenticular spots in the skin, their effort was a failure before they began? That is to say, if antiseptics are given with a view to reach the bacilli through the blood, the effort is a failure. In the opinion of the writer, if scientific medicine indicates anything, it indicates intestinal antisepsis as the only rational treatment in typhoid fever.

No man can intelligently say that intestinal antisepsis is a failure until he has discarded other forms of treatment and relied upon a systematic course of intestinal antiseptic treatment from beginning to finish, in at least a reasonable number of cases. The percentage of doctors that have done so is very small.

The greatest cry against intestinal antiseptics comes from the men who have either never used them, or have used antiseptics without any regard to the real pathological conditions existing, hoping to hit somewhere.

We hear men talk about the absurdity of introducing a germ-killer into the intestinal canal. And men sometimes talk loud about the high percentage of carbolic acid necessary to destroy the typhoid bacillus, and in the same speech claim that it has not yet been determined what the typhoid bacillus is. Those men never use intestinal antiseptics. There is a great difference between a germ-killer and an antiseptic, as applied to intestinal antisepsis. Every observing man in practice, with an unbiassed mind, can no doubt remember cases in which the odor of the discharges was favorably changed as a result of the continued use of remedies known as antiseptics, and yet those remedies were not regarded in the light of germ-killers, but possessed the ability to at least impede the action of the bacteria of decomposition.

The writer is frank to admit that it requires the courage of conviction to step aside from the long-trodden paths of expectancy, cold-bath treatment, antipyretics, with other empirical measures, and place his patients upon a systematic course of intestinal antisepsis, to be continued from beginning to finish, in the face of the opposition that is still offered by the profession; but it is gratifying to have a consciousness of the fact that we owe our first duty to our patient. Careful study of the pathology of the disease gives us a scientific basis for such a course, and then it becomes still more gratifying to know that the results justify the means used.

We have the specific bacilli at work in Peyer's patches; we have some of the various pus-producing germs in the intestinal canal, ready to extend the local lesions by suppurative inflammation so soon as the vitality is sufficiently lowered by the action of the specific bacilli; and in addition we have the ever-present bacteria of decomposition. Now, as far as possible, we want to hinder the growth of the specific bacilli, for in so doing we limit the amount of toxine absorbed, and in the same proportion render mild the systemic symptoms; at the same time we are preserving, to a greater or less degree, the vitality of the local tissues against the action of the pus-producing micro-organisms. It is also desirable to limit the action of the various micro-organisms contained in the lumen of the bowel, to watch carefully the condition of the stomach and mouth.

From carefully conducted clinical observation, the writer is fully convinced that salol affects the specific bacilli to a greater degree than any other remedy now before the profession.

We are aware that it is claimed that salol, though not absorbed until after it enters the small intestine, yet does not enter the system through Peyer's patches; we are satisfied, however, that when salol returns to its original constituents in the small intestine, its properties would reach the bacilli to some extent by endosmosis, at least; but let that be as it may, the administration of the drug favorably influences the course of the disease. We give salol in capsules, in doses of five to ten grains every four hours, as indicated by the symptoms.

Upon the same principle we have become satisfied that sulpho-carbolate of zinc has the most favorable influence in limiting the action of the various micro-organisms in the lumen of the bowel, as manifested by the absence of tympanites, diarrhœa, and the characteristic odor of the stools, with far less frequent hemorrhage. It may be given in doses of two to five grains every four hours, alternated with the salol, as indicated by the abdominal symptoms. Though regarded as of little importance by the non-believer in internal antiseptics, it is of much value to the patient to rinse the mouth thoroughly with equal parts of listerine and previously boiled water, each time before taking anything into the stomach, and teaspoonful doses of listerine may be given in water from four to six hours apart, as indicated, to keep the stomach in condition to receive nourishment. A small quantity of alcohol in some form promotes assimilation.

With reasonable nursing, feeding, and hygienic surroundings, the writer expects his typhoid patients, under this system of treatment, to pass through the disease with a temperature reasonably mild, without delirium, headache, or excessive tympanites, with a moist and comparatively clean tongue, with hardly a probability of hemorrhage, almost certainly without perforation, without troublesome diarrhœa—in short, with a comparatively mild fever in every possible sense. Its duration being shorter, convalescence is more rapid and complete.

The success of the above-outlined system of treatment will certainly depend to a great extent on the attention to details in the management of each individual case: for we know that it is the little things that often change the balance on great questions in law, and no less so in the science of medicine. Hence the systematic employment of intestinal antiseptics in typhoid fever does not exclude the use of any scientific measure that may be employed as an adjunct thereto. We can often benefit the case by sponging with tepid water to reduce the temperature, or to relieve a restless condition and produce sleep. An opiate may be required to produce rest. A cup of hot water may often quiet a nauseated stomach. Hot milk may with benefit often displace iced milk. In addition to the action of remedies on the specific cause, our success in sustaining the heart's action will be in proportion to our ability to maintain nutrition and meet those particular indications in each case.

Just as our Government would throw around the President of the United States the safeguards of his cabinet, so we should throw around the specific treatment of typhoid fever the safeguards of scientific research and common sense.

THE CLIMATIC TREATMENT OF PHTHISIS, WITH A DESCRIPTION OF THE CLIMATE OF ASHEVILLE, N. C.

By KARL VON RUCK, M.D.,

ASHEVILLE, N. C.

Climatic treatment in phthisis has been our chief resource for many years past, during which time we must have gained not only valuable information of facts as to the proper climate to be selected, but also as to how the climate is to be employed in the individual case, in order to reap its greatest benefits.

When, within the last few years, more direct and specific modes of treatment were proposed, climate was, in a measure, set aside, or underestimated; but the profession quickly recovered from its temporary neglect, and I venture to say that there are few among us to-day who would not exchange the prospects from any particular method of direct treatment for the prospective benefits that a properly selected and rationally employed climate can confer.

If climate, however, holds its reputation justly, and its value is as great as we believe it to be, it is pertinent to inquire what particular attribute of climate should we value most, and how shall we best employ it for the individual case.

But, inasmuch as climate is in no wise specific in its effect upon tubercular and phthisical processes, and inasmuch as experience has shown that other than climatic influences also affect the course of the disease favorably, it goes without saying that these other means should find full consideration in connection with the climatic treatment itself. I propose, therefore, to consider:

1. What should be the essentials of a favorable climate: *a*, for early stage cases where the object is to cure; *b*, for advanced cases where we can only hope to prolong life.

2. In what respect does Asheville, N. C., comply with these essentials.

3. How is the climate to be employed so as to obtain its greatest benefits; and,

4. What other of our therapeutic resources should be combined with the climatic treatment?

If we wish to judge of the beneficial influence of climate by the climate prevailing at particular resorts which are most popular and most frequently recommended, and which, it might be reasoned, experience has found the best, a queer state of affairs confronts us.

We find on one hand, in Europe, the Riviera largely frequented by phthisical patients. It has no appreciable elevation, but a moist climate, mild and otherwise pleasant, especially in certain parts of the year.

In this country we meet a large number of patients seeking climatic influences along the coast of the Atlantic, in the Southern States, and the coast of the Pacific, especially of Southern California, without elevation, moist, but pleasant chiefly on account of conditions of temperature during certain times of the year.

We find, next, many patients frequenting the seashore resorts in the summer, pleasant on account of their gayety, but supposed valuable on account of the sea air; and

others we find in pine woods like the Black Forest in Germany, and the pines of New Jersey, with Lakewood as its centre, because of some peculiar, unknown virtue of the emanations from the pine trees; and those believing in, but unable to go to, resorts of that character, sleep on pine-needle pillows at home, and inhale a few drops of pine-needle essence during the day.

Others, still, seek northern localities like Minnesota, in summer, because it is supposed to be cool there, when, in fact, high maximum temperatures are frequent; and a few, also, frequent northern localities in the winter because the weather is cold and bracing.

On the other hand, we find the elevated resorts gaining steadily in popularity both in Europe and America; in the former country we find consumptives in great numbers at the Alpine resorts in Switzerland, and here in portions of the Alleghanies, in the East, like the Adirondacks, and Western North Carolina and the Rocky Mountains in the West, especially Colorado and New Mexico.

In addition to all this, there seems to be no special selection of the cases: they are met in any of these resorts in every phase and stage of the disease, at all times and seasons of the year, and it is evident that with such a variety of climate presented in the regions mentioned, many of which offer directly opposite conditions, one cannot help asking the question, "What was the real object in sending the patient to one place or the other?"

That a clearness of perception is wanting by many, as to the particular attributes of climate which is to aid in or effect a cure, becomes still more manifest when we see a climatic resort, highly popular for a few years, afterward abandoned for another: and I became the more impressed with this deficiency when, being present in the consulting-room of an eminent Eastern physician, and he having enjoined a phthisical patient to go to Lakewood, N. J., I asked him afterward his reason for sending that particular patient to that particular place. He replied that he did not really know, but that the place was near by.

From all this it follows that we cannot get an ideal standard of the requisite conditions of climate by knowing what climatic conditions one or another popular resort represents, and we must look to more general considerations and to the opinions of the leaders in climatic treatment for information.

Fortunately, we are not left in doubt by the latter, and their opinions are unanimous that elevation, humidity, and temperature are the main objects to be considered in the choice of a proper climate. This concurrence of opinion by the leaders in the profession, on the subject of climatic treatment, makes it unnecessary to quote them individually. Elevation being foremost, combines necessarily diminished atmospheric pressure, more intense sun-temperature in proportion to the given height, and, being as a rule, mountainous regions, without malarial influences and of scarce population, away from the centres of commerce, manufactures, and agriculture, the atmosphere is pure and free from organic admixture and dust.

At such elevated stations, away from the seacoast and large bodies of water, with natural drainage, and having higher sun-temperatures, the air contains less moisture than when the reverse is the case, and a comparatively dry climate is the result.

The temperature of such localities, however, varies greatly. Extremes are undesirable for the consumptive. If, as will be shown later on, he is to live out of doors as much as possible, he must avoid degrees of cold against which it is difficult for him to protect himself, and he must also avoid the extremes of heat, against the enervating effect of which he can find no protection at all.

Extremes carry with them, also, great and sudden variations and great daily ranges of temperature, which the consumptive feels keenly and often to his detriment.

It follows, therefore, that the most desirable climate for the treatment and cure of phthisis is one having a moderate elevation, by which extremes of temperature and great daily ranges are avoided; a climate which is relatively dry; a mountain climate free from malaria, with otherwise a pure, dust-free air, and presenting temperature conditions allowing the greatest freedom of out-of-door life, not too warm, not too cold, with plenty of sunshine; and if external impressions count for anything, fine scenery would be a welcome addition. It is also desirable that the climatic conditions are favorable, not only for a few months out of the year, but for many months in succession—all the year around being the best. It is further desirable that the climatic resorts should be of easy access, avoiding, as far as possible, severe and prolonged journeys, and the fatigue incident to such travel.

It is not less important than any of the other conditions that the climatic resort affords the necessary comfort of good house and food, that the invalid shall have all necessary advantages and care which his condition requires, and that there shall be proper medical skill available to safely direct him on his road to recovery.

A climate as thus described being highly favorable to a cure, is not necessarily so to the prolongation and greatest comfort of life for that unfortunate class of patients who have so far drifted beyond the earlier stages of the disease that recovery is no longer possible; and, at certain seasons of the year, especially the colder months, they do better elsewhere.

A patient so advanced has lost much of his adipose tissue, he is thin and emaciated, anæmic, and weak in strength. He keenly feels even slight degrees of cold, and more still, a quick change to colder weather; he cannot be out of doors, unless in sunshine, during many days of the winter months, without being so heavily wrapped that he becomes tired and exhausted from the weight of his coverings; and he cannot walk or exercise at all with the heavy garments needed to keep him warm under his slow pace and deficient circulation.

Such patients do better in the colder winter months at places which have a more equal and warmer temperature, and, even so, if the air is less dry and the elevation little or nothing.

Patients in such advanced stages who suffer from amyloid kidney and the thereby induced heart complication, or who have a weak heart on account of the extreme anæmia and general debility, especially in the presence of extensive involvement of the lung, are apt to die quickly of heart failure upon arriving at elevated stations, and they should never be sent there.

In what respects Asheville, N. C., complies with the requirements for climatic treatment of phthisis, the reader can judge for himself from the following description and data, being in part an extract from a former paper published in the *Climatologist* for September, 1891:

"The meteorological data are extracts from the records of the local United States Weather Bureau under my charge, and are obtained from self-registering instruments furnished and approved by the department in Washington.

"Asheville is situated upon a hilly table-land, at an elevation of 2,350 feet, in the culmination of the Alleghany Mountains in Western North Carolina, in the divergence of the Great Smoky Mountains and the Blue Ridge.

"Completely surrounding this plateau of thirty miles in width, the Blue Ridge to the south, east, and northeast, and the Smoky Mountains to the west and northwest, are the projecting spurs and peaks of these ranges, with an elevation double and almost treble that of Asheville; and the meteorological conditions of the plateau are peculiarly influenced by these high mountain chains, in temperature, in the dryness and purity of its atmosphere, and in the amount of the precipitation.

"The rain-clouds, especially those approaching from a southerly direction, are saturated at a higher temperature than that which they meet on passing over these mountain ranges, and on that account precipitate their moisture before reaching the plateau: at any rate, there is a difference of some fifteen or twenty inches of annual

rainfall, and from 10° to 12° in the relative humidity between places situated outside of the plateau and of Asheville, where the humidity is comparatively low, being from 50° to 60° in winter, and from 60° to 70° in summer.

"The temperature is modified in the winter season by the prevailing air-currents from the south, while during the warmer months they come, as a rule, from a northerly direction; which, together with the elevation, make the summer months cool and pleasant.

"The mean temperature for the six months from May to October is 65° F., with a mean maximum of 76° F. For the winter months the mean temperature is 49° F., and the mean minimum, 60° F.

"The Asheville plateau is particularly known for the great amount of sunshine, especially in the winter months, which justly earned it the appellation of 'The Land of the Sky.'

"During the entire year the clear and fair days average twenty-four, and in the summer months twenty-seven and one-half days, out of each month.

"For an elevation of two thousand three hundred and fifty feet, and with a complete enclosure by high mountain chains of from four to seven thousand feet in height, the range of temperature and daily variations are also remarkable, the average of the former being less than 20° F., and of the latter only 3° in the summer and 5° in the winter months.

"The per cent. of ozone in the air has now been recorded daily for over three years, and averages from 50° to 70° of the possible amount. This is certainly an interesting and remarkable feature, when we consider that in many localities the amount is so small as to be scarcely appreciable. In a series of observations made by me in Ohio, I could not get a trace for weeks, and scarcely an average of five per cent. for months together.

"Upon this forest-covered plateau, surrounded by forest-clad mountains extending for hundreds of miles in some directions, with few or no human habitations, without marshes or standing water, and the plateau too having the advantage of the most perfect natural drainage, there is nothing to contaminate the air, which is particularly free from micro-organisms and impurities of any kind—so much so that severe injuries and surgical wounds heal promptly, often without antiseptic measures; and the occurrence of consumption and malaria among the natives of the plateau is denied altogether by many of the oldest physicians, and certainly is of the rarest occurrence.

"The soil is a peculiar mixture of clay, sand, mica, and iron. Little of it has ever been disturbed by man, being still covered by primitive forests of balsam, pine, oak, walnut, hickory, and almost every variety of timber.

"The scenic effect, from any of the many rolling hills of the Asheville plateau, is most beautiful, and cannot be appreciated except by the eye of the beholder.

"Quiet and peaceful in its immediate vicinity, it is grand in the more distant view of the majestic mountains and their towering peaks, which surround it on every side, causing involuntary wonder and reflection upon the terrific forces which at one time must have been active in producing such violent upheavals of the earth.

"Ever new and different, even in short distances from points of observation, new valleys and new mountain peaks present themselves as surprises, and the walks and drives in all directions lure the spectator along; this being, indeed, sometimes of doubtful advantage to the sight-seeing invalid, who forgets his fatigue in his rapturous admiration of Nature's possibilities. The ever-changing smoky mist hovering upon the peaks and about the mountains, the effect of the shadows cast both by clouds and adjoining pinnacles, the sunrises and gorgeous sunsets, must be seen to be appreciated, and the tourist feels well paid, when, after perhaps thousands of miles of travel, he catches the first glimpses of these still indescribable scenes.

"Asheville and its vicinity has been well and favorably known for half a century or more to the Southern people, for its peculiar beauty and cool mountain air, and it has been the popular summer resort of the South for health and rest before and since the war; and the difficulties of access, before the advent of railroad facilities, were unflinchingly overcome by the visitors in days of staging or horseback travel.

"Its winter climate was, however, little sought or understood at these times, and it was not until Professor J. W. Gleitsmann, now of New York, established his sanitarium for consumptives here, some fourteen years ago, and through his writings called the attention of the profession to its advantages, and proved them by his results, which are still among the best in phthiso-therapeutics, that Northern physicians began to send many patients to Asheville for the winter.

"Since that time Asheville has had a wonderful growth and development, and has become accessible by rail from all directions. Its population has steadily grown at a pace of increase of a thousand a year, and it is, to-day, the second city in population, and the first in popularity and importance, of North Carolina.

"Many Northern people have since made it their homes for health, pleasure, or business, and even a Vanderbilt felt justified in the expenditure of a number of millions of dollars to create here a home surrounded by advantages that money elsewhere could not buy.

"The facilities for the care of both tourists and invalids are ample and constantly increasing with the demand. There is now an efficient Board of Health of medical men which, since its short period of existence, has done wonders toward making Asheville one of the cleanest, and from a sanitary stand-point, safest, health-resorts in this country. With the increased powers contemplated for the board, and heartily endorsed by the people of Asheville, and which await only the sanction of the Legislature, there is no doubt that ideal conditions in sanitation and public health matters will hereafter be the just pride of the city.

"The increased facilities for a plentiful, pure water-supply are nearing completion, and will be in operation before this paper can reach the publisher. A system of Hyat filters was put in several years ago. The sewerage has recently been increased and perfected, the principal streets are well paved and have good sidewalks.

"Electric street railways connect the different parts of the city, and amply accommodate the local travel. The streets are lighted with electricity, and a well-equipped paid fire department is maintained. A city court-house and public market have been built and opened within the last year.

"The hotel and boarding-house accommodations are ample, and the visitor can, according to his circumstances, command as good accommodations and entertainment as he is able or willing to pay for.

"Its climate, as has been shown, is pre-eminently an all-year climate, there being no part or season of the year which compels patients, still in a condition to derive benefit, to seek other localities. In the months of January and February, however, advanced cases, such as I have mentioned under the class where only the prolongation of life is the object, should not come to Asheville. The weather during these two months is too cool for them, and they will find the spring, summer, and fall months more suited to their conditions.

"The highest summer temperature observed since I have had charge of the weather service was 89° F. It cannot be said that during these four years the summer temperature was at any time oppressive, and light wraps have been comfortable, on most of the summer days, in the mornings and evenings.

"The winter months, while not warm, are not severely cold, and there are few days upon which patients in the earlier stages of disease cannot spend from five to eight hours out of doors, especially in protected places and the middle of the day, and when the sun shines overcoats are uncomfortable.

"Asheville, N. C., stands practically alone in the United States as an all-year favorable climatic resort, meeting all the requirements we make of climate, and possessing none of the marked disadvantages so frequently noted at greater elevations, as observed in Colorado, New Mexico, Texas," etc.

Dr. J. W. Gleitsmann, to whom not only Asheville but the profession and the general public are indebted for scientifically studying and publishing his observations with reference to the climate of this locality, found that the daily variations of temperature are much less in Asheville, and within safer limits, than found in other popular resorts.[1] Comparing the summer of 1874, the extremes of fifty-one Canadian weather stations, all having a lower mean temperature than Asheville, he found that at forty-seven of these the temperature several times exceeded 90° F., while in Asheville it only once reached 88° F. During the same period the temperature reached over 90° F. at Sandy Hook three times; in New York City, five times; in Denver, Col., fifty times, with a maximum of 102° F. at Colorado Springs, thirty-nine times with a maximum of 101° F.; at St. Paul, Minn., twenty-five times with a maximum of 99°. Reverse results were observed by him in the winter months, so that other resorts with similar means, showed correspondingly lower minimum temperatures.

To obtain the full benefit from climatic treatment the climate must be properly taken advantage of, and it requires the constant watchfulness of the physician who directs the management of a particular case to derive all the benefit and avoid harm.

Many of his directions depend upon the patient's general condition, of which, therefore, the managing physician must be constantly informed. He must also pay strict attention to the minute details of the patient's life, habits, diet, etc.

Patients still strong and vigorous, with no active processes going on for the time being, should rise at a reasonable hour, and, after receiving the cold rub, douche, or bath, as the case may be, should take from ten minutes to one-half hour's exercise before breakfasting.

If, however, the patient be somewhat debilitated, or if he have but slowly reacted from the cold bath, the omission of giving him a glass of hot milk before going out, may bring disaster by his becoming chilled on a brisk, cold winter morning, when his exercise is not, or cannot be, active enough for a sufficient circulation.

Having taken his breakfast, he must at once go out again; this time, however, to rest for an hour upon a comfortable reclining-chair, in the colder season with his extremities well wrapped and his person otherwise protected from wind and cold weather. This rest is essential for proper digestion, and after it is well under way exercise is in order. The amount must, however, be regulated by the patient's strength, and while some patients must be content with a promenade upon a piazza, others may go out into adjoining woods or follow easily graded paths, in company with others. The patient must not exercise vigorously enough to get short of breath, nor long enough to become sensibly fatigued; and, accordingly he rests upon benches in his pathway, or returns to the piazzas of the house, according to the duration of the exercise. It is repeated again in another direction after rest in the open air, or not; at any rate, from one-half to one hour before dinner he should be at rest out of doors. The dinner over, the programme of the morning is repeated, unless for those who have gotten along far enough to go out carriage or horseback riding, which can vary the walking exercise, the time being controlled by the physician. Rest follows again before supper, and then, according to the state of the humidity and temperature, the patient goes out again for an hour or two, resting upon a reclining-chair, when he returns to the house for an hour or two of social conversation, games, or other pastime. At ten o'clock he retires. His sleeping-room must have been well-aired during the day, and, according to the outside temperature, a window is left more or less open during the night. His physician sees him frequently during the day, and the patient is, in addition, instructed to report to him anything unusual, as to his general feelings, cough, fever, fatigue, appetite, digestion, etc.

This programme must be carried out day after day, week after week, and month after month, and, as the improvement continues, more exercise is permitted, and must be demanded of those who are inclined to become lazy and to lounge. With that class who are really in an incipient and early stage of the disease, this management will, as a rule, suffice so long as all goes well.

The physician's part is to see that the climatic treatment is properly followed, to observe the local disease by frequent examinations and records, to determine on less favorable days the time to be spent out of doors, to regulate the exercise and see that no errors are committed in drink and diet, to keep his patient steadfast and determined, to prevent relapses, and to promptly recognize and meet any deviation from a favorable course.

It is otherwise with patients who have more or less active processes going on, and, unfortunately, the majority of patients do not come early enough but that they arrive in less favorable conditions. With these the directions must be for the day, or even for the hour.

In some cases, especially such as rise with a subnormal temperature, much care is required with the cold rub or douche; the former only may be permissible, and low degrees of temperature of the water may have to be avoided for the time, according to the state of circulation and general condition. It may be best for the particular patient to take his breakfast and rest afterward in bed, and bring him out of doors only at 10 or 11 o'clock, there to exercise gently, only upon the piazza, or observe absolute rest if his temperature is already rising.

When the rise begins with a chill and occurs in the forenoon, he cannot leave his bed at all; instead, hot-water bags to the feet, stimulants an hour before the expected chill, and again at the hour at which the chill occurred on the previous day, must be made use of. The bed must be brought to the open window for fresh air and sunlight, and the subsidence of the fever awaited before the patient is allowed to rise to go out of doors.

If the patient be very weak, he is transferred to a cot and carried out, as even the effort of dressing may be too much. Such patients need plenty of sunlight, massage must take the place of exercise; the latter is only to be employed and increased judiciously as the case approaches more and more a period of arrestment of acute processes, and as the patient improves in flesh and strength. The diet must be most carefully regulated, being light during fever hours, and these light meals must be supplemented with milk, broths, etc., given at frequent intervals

Rectal feeding becomes necessary and should be resorted to whenever the patient is perceptibly losing flesh and the ordinary feeding cannot well be increased. Additional means at our command, which we can with advantage combine with the climatic treatment are, in the first place, all those which aid in arresting the acute processes. Rest and proper diet are of the first importance, and, next, such agents as will be desirable on account of their food value, like koumyss, malted milk, malt extracts, fat emulsions, etc., adapted to the condition of the particular patient.

As indirect aids to nutrition we have the use of oxygen inhalations and exhibition of ozone preparations, which, in the absence of fever, should be combined with mild preparations of iron.

Alcoholic stimulants become also an aid both for the proper treatment of fever in the form of heavy wines or cognac; the light, mildly acid wines such as clarets, Rhine wines, and Hungarian wines, given with the principal meals, aid digestion.

Of course, any complication should be promptly recognized and treated upon general principles, at the climatic resorts as well as at home.

[1] Asheville, N. C., und seine Vorzüge als Curort für Lungenkranke, New York Medical Monatsschrift, December, 1892.

The pneumatic cabinet is, in my judgment, an important aid to climatic treatment. It must, however, not be employed as long as there are any active processes going on in the lung, and not until they have been absent several weeks or more.

There is no doubt in my mind, after nine years' use of the apparatus, that it has a most beneficial effect upon the local circulation, and thereby upon the nutrition of the lung; that it contributes to its better ventilation, strengthens the respiratory muscles and respiratory forces, increases the vital capacity, and counteracts passive congestions and extensive connective-tissue shrinking when properly employed and made use of at the proper time.

I feel somewhat timid in venturing my opinion that tuberculin is also of great value in connection with climatic treatment, knowing how adversely many of the profession look upon its value. Having for the latter reason abandoned its administration, unless by special request of the patient and his home physician, I may be permitted to record my abiding faith in the agent, nevertheless.

I have seen such nice results under its use, and have been able to avoid all unpleasant symptoms in its administration in minute doses, and under the precautions which I have urged upon the profession in my writings upon the subject, that I would not feel true to my convictions to acquiesce in the general condemnation.

I admit it requires nicety of judgment and absolute control of the patient, besides unremitting vigilance in the observation of its effect, which makes its use outside of an institution extremely hazardous; still that is not to the discredit of the remedy, it only limits its use to those who have the ability, the facilities, the time, and the necessary interest to properly employ it.

In conclusion, I wish to add another essential to climatic treatment, namely, "Time." Patients cannot recover from tuberculosis, no matter how early a stage in which they arrive, in the course of a few weeks or even a few months. They can get better, and often very much better, in a short season, but they do not actually recover.

Much less can be expected for advanced patients, as to permanent results, from a few weeks or months most judiciously carried out climatic treatment combined with all available aids; and even when the arrestment of the disease has been accomplished, the patient should still continue at the climatic resort, only with more liberties as to exercise and exertions. He may then do without the strict professional oversight and care, having learned how to take advantage of the climate, and the circumspection of conduct essential to his welfare; but he should remain much longer than is usually the case, to make his benefits lasting and permanent.

Asheville, N. C., December 10, 1892.

Treatment of Impotency.—"Many of the so-called impotents," says Dr. Remondino (*Medical Review*), "are only so in imagination, and the physician should not neglect to attend to their mental condition. A quarter of a grain of cannabis Indica extract two or three times daily is often a good moral and mental lever. A French physician, in the early part of our century, acquired a great reputation in the treatment of such cases by using an exhauster into which the penis was inserted and the air exhausted by means of an air-pump. In one case he received a large fee by procuring an heir in an extinguishing family by using his apparatus in a desperate case—the congested penis being transferred immediately from the exhauster into the marital receptacle. This employment would not, however, be considered dignified for a physician. If all these means should fail, I should advise a hermit existence and a purely vegetable diet, preceded by a liberal phlebotomy. When these have all failed the man can consider himself a eunuch to all intents and purposes."

CONSERVATIVE MIDWIFERY.

By H. WORK, M.D.,

Pueblo, Col.

What are the necessary and rational precautions to be observed for the safety of the puerperal woman, and what are the unnecessary and deleterious, has become a question of very great practical importance to the conscientious obstetrician; not from a paucity of teachers and theories, but because of the extreme views urged through the public prints regarding the treatment of the lying-in-woman.

Antisepsis, so called, is perhaps the caption under which pernicious practices are most freely indulged, and are all the more harmful because done under the guise of science, with the belief that benefit will accrue. However, the trend of the recent history of obstetrics impresses the mind with admiration for the resisting powers of nature, rather than with approval of many of the doctrines set forth.

From that period when nature was the only accoucheur until now, when her teachings are utterly ignored by some writers, the treatment of the puerperium has so radically changed that it is safe to predict that the two extremes have been reached and that the truth lies midway between.

The present ultra-teaching and practice of flooding the vaginal canal, scraping and rubbing its mucous membrane previous to the beginning of labor, for the destruction of an imaginary toxic presence, seems meddlesome, if not pernicious, for the reason that the loss of mucus there deposited, together with the destruction of the epithelial covering, prepares a nidus for the lodgement of, in all cases, a more or less irritating lochia.

That the chief function of these same cells and mucus is that of protection against infection, no one doubts; and why these natural safeguards should be destroyed that an artificial one may be substituted, is difficult of comprehension, explainable only as an inevitable result of the popular attempt to make of nature the assistant in midwifery.

The repeated projecting of liquids, even of the blandest nature, against the cervix, its bathing and softening, the inevitable consequent of vaginal douching, is in itself sufficient in given cases to precipitate labor, and experience has abundantly proven it to be unnecessary, while the adjustment of an iodoform tampon, so recently recommended by a French writer, need only be mentioned to be condemned. I believe the disinfection of the woman soon to be delivered is unnecessary as a routine practice, and in many cases positively injurious. It has become very evident, however, that the dread of puerperal infection, or the zeal born of recent graduation, or both, has driven some of the recent contributors to obstetric literature beyond the limits of reason in their feverish search for its preventives. They have forgotten, in practice at least, that the indispensable condition is the protection of the patient against her attendant and environments, rather than against a hidden hatchery of infectious microorganisms propagated and nourished by herself for her own destruction.

During the first five years of my professional life nearly, if not quite, three hundred pregnant women came under my care, including those who were confined at term, prematurely, and by abortion. Of these, six were dual pregnancies, one pair having undergone post-mortem changes in utero; and in no case was there puerperal infection, and in no case, save one, was the mother disinfected prior to delivery. Bearing in mind that the practice was a general one, that many of these births occurred in the midst of epidemics of diphtheria, scarlet fever, and small-pox, and that it was necessary to treat these and all other diseases common to a general country practice in the same day, and ofttimes in the same house with the parturient woman—which was done without thought of her disinfection—it does seem in the face of present teachings that many, if not all of these women

should have perished, or that the extreme views now urged have not been suggested by reason or experience.

Skill in diagnosing position and consequent infrequency of digital examinations cannot be urged as a protection to these patients, for examinations were frequent, and in two emergency cases the hand was passed into the uterine cavity without disinfection other than that afforded by laundry soap and water.

This practice is not, of course, recommended except as being preferable to death from post-partum hemorrhage, and is mentioned in this connection only as an intimation that a woman may be confined, and live, even in the absence of the bichloride solution.

In further violation of the present dictum of authority, for the first three years of this period the blood-clots were removed, so far as possible, with the finger; and for every case attended a vaginal injection of warm boiled water, with fifteen drops of carbolic acid to the quart, was insisted upon, daily, beginning twenty-four hours after delivery and continued up to the cessation of the lochia.

I have no apologies to offer the satellite of modern obstetric antisepsis for the above outlined routine treatment which doubtless appeals to his mind only through the terms of "criminal neglect," but humbly offer in evidence these three hundred witnesses, all of whom, so far as known, are yet alive. It is true the number of cases cited is small, but it must be remembered that it covers, without any exceptions, the whole obstetric work of a novice who did not bring to his patient the skill born of experience, a fact that all should be willing to concede will balance the smallness of numbers.

Of the theory which now advocates the diagnosing of position and progress of the child before birth, by abdominal palpation and the "grunts" of the mother, it is scarcely necessary to refer, as it never will be more than a theory, since its adoption would utterly preclude the gaining of knowledge by digital examination, so very essential in mal-presentations, and since it has been so abundantly proven that digital examinations, *per se*, are harmless.

Realizing that to even suggest less radical antiseptic precautions than those advocated at the present time is extra hazardous to the medical standing of him who so ventures, yet I believe many of the profession have lost sight of the fact that pregnancy is a condition provided for by nature, of which parturition is the physiological culmination. Although pregnancy occurs and exists exactly as in generations past, childbirth has come to be treated, at least, as the gravest of pathological conditions. Evidence that such theories should be promulgated and expedients practised for the protection of the pregnant woman against herself while performing the functions for which she was created, has not accumulated *pari passu* with their advocates. Yet the conservative physician has apparently been supplanted by the aggressive quarantine officer in obstetric practice.

I believe that the history of obstetrics, written and unrecorded, supported as it is by the teachings of Garrigues and other eminent American authorities, establishes beyond cavil, as facts, that the routine disinfection of the pregnant woman is not only unnecessary, but injurious. And it is to be hoped that the present tendency to aggressive midwifery will soon react in favor of that founded on reason and experience.

419½ Santa Fé Avenue.

A Quarantine Officer Quarantined.—A Roumanian physician who was sent to Verciorova to take the necessary measures of precaution there against the spread of cholera from the neighboring place of Portes-de-Fer, having paid a visit to the latter place, was refused admittance on his return to Verciorova by the quarantine medical officer. This decision was confirmed by the head of the service, who imposed the five days of quarantine required by the regulations on the physician in question.—*The Medical Week.*

A CASE OF ASTHENOPIA WHERE GOLD SPECTACLES WERE INJURIOUS.

By W. H. BATES, M.D.,

NEW YORK.

The patient could not wear gold spectacle-frames with the gold nose-piece in direct contact with her nose without great distress. She was relieved by a simple device. The case is reported in detail to show that there was more than a hysterical element to deal with. The case is also of interest as suggesting an occasional cause of failure in relieving neuroses with glasses.

Mrs. J——, aged thirty-three, no children, uterine trouble, headaches from the age of puberty. General health otherwise good. She is a tall, powerful woman, and weighs one hundred and fifty pounds. The patient had been wearing: Right vision, — 1 D. C. 130°: Left vision, — 1 D. C. 45°: in steel frames for several years with great relief to her headaches. The above glasses were prescribed by a competent physician—no mydriatic used.

November 20, 1891.—The patient presented herself with the statement that she would like to wear gold eye-glasses for "style." As the glasses she was wearing seemed to give her relief, and as she accepted nothing better, she was assured that all she had to do was to go to the optician and have the same glasses put in gold frames. She purchased a nice pair of gold eye-glasses, with a chain, etc., with which she seemed quite proud. But when she wore her gold eye-glasses the headaches came on with great severity. She returned to me very much troubled because she could not wear them, and found fault with the optician. She believed that the optician had made a mistake in the strength of the glasses. The glasses seemed to me to be all right, and she was recommended to visit the optician again to obtain his judgment of the frames. The optician could not help matters.

It seemed to me that possibly the headaches were due to the eye-glasses being unsteady on her nose, and with the hope that spectacle-frames by being firmer would relieve her, she was advised to change to gold spectacle-frames. This was done.

The gold spectacle-frames looked well, and the patient seemed satisfied. But she could not wear them. The glasses were tested again and again, and the strength and axis of the cylinders found to be correct. The glasses seemed to be properly centred. However, the nose-piece did not allow the centre of the glasses to fall below the level of the pupils, as in her old comfortable steel frames, and she was advised to have this fixed, which she did. The nose-piece was altered several times. The bows were also manipulated, etc. The patient had made so many excursions to the optician that his good-nature, for which he is famed, was finally exhausted. I have a great respect for this optician, and believe that he did unusually well. The patient herself became tired of the trouble of it all, and it was only at my earnest solicitation that she persevered in making the foregoing numerous changes.

During the latter part of December, 1891, she gave it up and wore her old steel frames with comfort. With the beginning of the new year her courage came back, and another effort was made for "style."

January 2, 1892.—Under Merck's homatropine three per cent. solution. Right vision, $\frac{20}{30}$ +; with + 0.5 D. C. 20° ⌒ — 0.25 D. C. 110° = $\frac{20}{20}$. Left vision, $\frac{20}{30}$ +; with + 0.5 D. C. 135° ⌒ — 0.25 D. C. 45° = $\frac{20}{20}$.

Tests made on subsequent days did not agree with the above result or with each other. Atropine was ordered and used for three days, when the accommodation became paralyzed and the correction found January 7th agreed with that of January 8th as follows: Right eye, + 0.50 D. C. 25° ⌒ — 0.25 D. C. 115°. Left eye, + 0.75 D. C. 125°.

These glasses were put into gold frames and worn constantly before the effect of the atropine had worn off. The glasses felt uncomfortable from the beginning, and the distress increased until the headache and pain in her eyes

became unbearable. To obtain relief she had to return to her former minus cylinders in steel frames. From time to time she tried to wear the gold spectacles, but without success.

February 22, 1892.—Has worn her gold spectacles all day and has a terrible headache. The same glasses in a heavy steel trial frame relieved her at once. Now came the inspiration which solved the problem. The glasses were all right but the frames were not. The gold spectacles were put on, and a piece of tissue-paper was placed under the gold nose-piece, preventing contact of the gold with the skin. No headache after two hours.

A dentist burned in a thin coating of rubber on the under surface of the gold nose-piece, which prevented contact of the gold with the skin, and now the patient wears her gold spectacles without headache or discomfort.

December 20, 1892.—It is now about ten months since the patient has been wearing her gold spectacles, and she has been more comfortable than ever before.

Summary.—1. Minus cylinders in steel frames, relieved. 2. Minus cylinders in gold frames, could not be worn. 3. Full correction in gold frames, could not be worn. 4. Full correction in gold frames, but with the gold not in contact with the skin, relieved.

131 West Fifty-Sixth Street.

Progress of Medical Science.

The Origin of Hæmoglobin.—We look to comparative physiology and histology for much of our information on the origin of the blood-corpuscles, and quite recently considerable light has been shed on the subject by the researches carried on in both the phylogenetic and ontogenetic relations of these corpuscles (*The Lancet*). In the "Transactions of the Canadian Institute for 1891," Dr. A. B. Macallum deals with the question of the origin of hæmoglobin of the fusiform corpuscles and of the hæmatoblasts in the blood of amphibia. Working with lake lizards and the larvæ of Amblystoma punctatum, and examining the blood fresh, or fixed either in the fumes of osmic acid—one per cent. solution for two hours—or by a saturated solution of corrosive sublimate or picric acid, or by Ehrlich's fluid (the only fixing reagents which he found serviceable), and staining with the various color-reagents usually recommended, he obtained most beautiful preparations, as a result of the study of which he concludes that the hæmoglobin of the blood-corpuscles is derived from the abundant nuclear chromatin of the hæmatoblasts. This chromatin, he considers, is an iron compound, the constant oxidation and reduction of which constitutes the chemical process underlying life. The fusiform cells of amphibian blood, he maintains, are derived from the blood-corpuscles—that they are in fact the remains of the broken up or destroyed red cells, the latter in this conversion losing the cell membrane and the greater portion of the discoplasma. The hæmatoblasts in Amblystoma are probably the direct descendants of cells split off from the extreme ventral portions of the visceral mesoblast. Of course the most interesting part of the paper is that dealing with the origin of the hæmoglobin and with the iron in this compound. The importance of the use of freshly prepared ammonium sulphide in aiding in the solution of this question can, from Dr. Macallum's evidence, scarcely be over-estimated.

Alumnol.—Alumnol is a fine white powder, very soluble in cold water, solutions of forty per cent. and more in hot water retaining all the substance when cooled. It is likewise soluble in alcohol and glycerine. It is chemically a combination of an aluminium salt with naphthol sulphate. It precipitates albumin, but differs from other astringents in that the resulting deposit is rapidly dissolved again in an excess of albumin. This property enables alumnol to penetrate into the tissues with the richly albuminous tissue serum. It dissolves in purulent secretions, and can therefore be readily used in secreting sinuses and cavities. The antiseptic action and the astringent effect of the substance are very marked. In surgical practice the strong astringent action is useful in suppurating surfaces and secreting cavities, the use of a lotion of half to two per cent. as a solution having the best results. In small abscesses and sinuses, cauterization with ten to twenty per cent. solution leads to rapid cleaning of the parts. Where there is ulceration with flabby granulations, as in chronic ulcers of the leg, a lotion or ointment of three to six per cent. acts well. Good results have been obtained in gynecology, skin diseases, gonorrhœa, and in ophthalmic practice.—*Berliner klinische Wochenschrift.*

Peritonitis in the Newly-born.—Apart from septic peritonitis, which was not infrequent in former times, congenital syphilis, stenosis, and atresia of the alimentary canal are recognized by Dr. Cassel as causes of peritonitis in the newly-born. Not infrequently cases occur in which no such cause is present, and three instances are given. They occurred in infants aged fourteen, twelve, and twenty-one days respectively. The mothers did not suffer from any puerperal affection. There was no evidence of congenital syphilis, and no stenosis of the intestine. The umbilicus was healthy. There was pain and tenderness in the abdomen, which was much distended, and presented a shining appearance, with enlarged veins over it. No fluid could be made out. The stools were irregular, and there was fever, with a tendency to collapse. Vomiting was only present in one case. In two of the cases the autopsy showed circumscribed fibrinous peritonitis, chiefly about the transverse and ascending colon, as well as catarrh of the intestines. The third case was thought to be one of suppurative peritonitis, as there were small abscesses present in other parts, but no examination was permitted after death. The diagnosis of peritonitis at this age is not always easy. There is, of course, no complaint of pain, and vomiting is mostly absent. As regards etiology, Dr. Cassel thinks that the peritonitis was secondary to an intestinal catarrh, which was present in all three cases. The prognosis is bad.—*Berliner klinische Wochenschrift.*

The Resistance of the Bacillus of Influenza to Physical and Chemical Agents.—Professor G. Tizzoni has carried out some experiments in his laboratory, and has obtained interesting results. At a temperature of 134° to 140° F. the bacillus is resistant for five to ten minutes; at 122° to 134° F., for ten to fifteen minutes; and at 113° F. it preserves its vitality for at least an hour; in aqueous vapor at 208° to 212° F. it is destroyed in one minute. At a temperature of −4° to −13° F., it is living for at least fifteen minutes; at 32° F. it preserves its vitality for a long time. With rapid desiccation it is resistant for twenty-six days; with this process carried on slowly it can be preserved up to seventy days or even longer, depending upon the rapidity of the abstraction of water. Under the action of light it perishes in between ninety-six and one hundred and forty-four hours. Among the chemical agents, as regards efficacy, sublimate stands in the first place, the strength being one-tenth of one per cent., and phenic acid two per cent., both, however, being acidulated with hydrochloric acid in the proportion of four one-hundredths of one per cent. Next comes nitrate of silver, one per cent. Caustic potash, at five per cent., can be compared with nitrate of silver at one to two per cent., is always a good disinfectant, and has a practical advantage. Of the mineral acids, sulphuric and nitric showed themselves to be weaker than hydrochloric and acetic. Last of all in efficiency come resorcin and absolute alcohol. Boric acid at five per cent. and chlorate of potash at one and a half per cent., were not of any evident value.—*American Journal of the Medical Sciences.*

Treatment of Syphilitic Ulcers. — Dr. Svertchkoff (*The British Medical Journal*) finds that inveterate or obstinate syphilitic ulcers of any kind are best treated as follows: The lesion should be thoroughly cleansed with a two per cent. solution of hydrogen peroxide, then dried

with absorbent cotton wool, and covered with a piece of wool soaked in a 1 to 2 mixture of carbolic acid and camphor. The dressing should be changed two or three times a day. In from three to five days the ulcer becomes cleaner, and studded all over with abundant succulent granulations. After this it should be dressed twice daily, either with a 1 to 4 mixture of aristol and vaseline oil, or with a mixture of dermatol and vaseline in equal parts, the layer being covered with a piece of mercurial plaster twice as large as the ulcer. Rapid cicatrization ensues, the lesion healing soundly according to its size, in from fifteen to forty days from the commencement of the treatment. The author mentions that in his hands the camphor-phenol mixture alone proved of great service in cases of simple ulcers, suppurating wounds, soft chancres, and chancroid buboes.

Condition of the Blood in Gastric Affections.—A considerable amount of uncertainty has hitherto existed in reference to the condition of the blood in connection with gastric affections, especially in ulcer and malignant disease of the stomach, and authors differ greatly in their statements on the subject. Dr. Orterspey has made some careful experiments in order to attempt to clear up these doubts, and the following are the results he has obtained (*The Lancet*): In nine cases of ulcer of the stomach the results were very uniform—diminution in the amount of hæmoglobin and in the number of red blood-corpuscles, these changes being particularly marked in those patients who had had hæmatemesis. These results of course correspond with the anæmic state so constantly met with in connection with this disease, and all previous investigators have found the same condition. Out of twelve cases of cancer of the stomach, in one the blood was perfectly normal, in eight the number of red disks was diminished, in eleven there was a diminution in the amount of hæmoglobin present, in five there was an increase in the number of leucocytes, while in two, although the hæmoglobin was diminished, the red corpuscles were about normal in number. All these changes are neither characteristic of the cancerous cachexia generally, nor of cancer of the stomach in particular, as they also occur to a similar degree in the course of many other affections. There is therefore no diagnostic difference in the blood to be noted in the two diseases, ulcer and carcinoma of the stomach. There is, perhaps, more value in the examination of the blood in doubtful cases, when there is uncertainty as to the case being one of malignant disease or chronic catarrh or a neurosis of the stomach, as the last two sometimes lead in extreme cases to the absence of hydrochloric acid in the gastric juice.

Death from Irritation Due to Ascarides.—A correspondent of *The Lancet*, writing from Trinidad, says that death from the irritation of ascarides is extremely rare. This may be the case at home, but in this colony round worms not infrequently prove fatal without revealing at the necropsy clear evidence of the way in which death has been produced. On looking through my notes of medico-legal necropsies in cases of sudden death during six years, I find the following record as regards round worms: In five cases the post-mortem examination showed either no lesions, or only such as could be attributed to the presence of worms in the intestine. In two cases round worms were found associated with other conditions, once with malarial fever, and once with pregnancy and dilated heart. In one case death was due to asphyxia caused by a round worm impacted above the epiglottis. The first five cases are those which concern the present inquiry. In one of these a volvulus was discovered in the ascending colon. In another, cerebral effusion was found. This has been mentioned by Eichberg, as a result of intestinal worms. In the other three cases, one of which has also been recorded, there was nothing beyond the presence of the round worms to account for death. Besides these cases, I have seen four others, in which the evidence of death from round worms seemed so clear that I did not consider necropsies necessary. If, then, this is the result of observation in one part of the colony during a limited period, it may be fairly argued that death from this cause is by no means uncommon out here. I understand that a similar frequent mortality obtains in the neighboring colony of British Guiana. In my experience the cases usually terminate too rapidly for the supervention of congestion or inflammation of the intestine such as is described by Eichberg and others, and I have always regarded the cerebral symptoms as mainly reflex. It is of course conceivable that violent and prolonged convulsions may in some cases produce such conditions as cerebral effusion or volvulus.

The Spleen a Necessary Factor in Immunity.—Drs. Pizzoni and Pattani assert that the spleen exerts an important influence in rendering animals immune to infectious diseases. Their experiments were conducted with the virus of tetanus upon guinea-pigs, and they found that those in which the spleen had been extirpated were incapable of being rendered immune, this incapacity being permanent. It would thus appear that no other organ is able to carry on the particular function of the spleen upon which the immunity depends, though its hæmatopoietic functions may, as is well known, be vicariously performed by the medulla of the bones.

Simple Method of Demonstration of Tubercle Bacilli.—Dr. Kaufmann describes the following method of demonstrating tubercle bacilli in sputum. A cover-glass preparation, after fixation, is stained, as usual, in warm carbol fuchsin. It is then moved gently to and fro for one-half to three minutes in water at or near the boiling-point. The preparation can then be double stained as usual, or examined directly in water. In the latter case the tubercle bacilli appear dark-red against a gray ground. The method is based upon the fact that most bacteria quickly lose the fuchsin stain in boiling water. Tubercle bacilli, however, retain it for some time, even over five minutes. The preparation should be spread out in a thin layer, because thick portions of tissue may retain coloring matter even longer than tubercle bacilli.—*Centralblatt für Bakteriologie.*

Hyperplastic Phlebitis.—At a recent meeting of the Clinical Society of London (*The Lancet*), Dr. Handford described the case of a man, aged thirty, with intermittent albuminuria, cardiac hypertrophy, high vascular tension, general dilatation of the superficial venules, obliterative endarteritis, and phlebitis, the latter nearly occluding the saphena and other large veins. The patient was a spare, dark man, showing signs of degeneration in his grayish hair, and an arcus senilis in each eye. He suffered much from migraine. He had been failing for two years, and lost a stone in weight. He denied having had gonorrhœa or syphilis, and there were no signs of the latter. He complained of pain in the left loin. The apex beat of the heart was heaving, and the first sound was distinctly reduplicated. The radials were thickened and the tension was very high. Both internal saphena veins stood out very prominently, and to the touch resembled tendons. There were no adhesions, and the veins could be rolled quite freely under the finger, but could not be flattened. In the horizontal position it was not possible to detect any flow of blood along the lower third of the main trunk on either side; but with the patient standing there appeared to be a slight movement of blood in them. A similar condition affected the external saphena veins, most of the branches of the internal saphenas, the radial, ulnar, and cephalic veins. There was no history of preceding thrombosis or of œdema. Under the use of iodide of potassium and mercury the vascular tension fell to normal, and the induration of the veins greatly diminished, but did not disappear, while the circulation through them became much more free. The albuminuria persisted in the intermittent form.

Possibly a Bachelor.—The new editor of a Chicago paper announces with seeming pride that he will enter upon his duties *sans puer*.

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WHY KILL ONE'S SELF?

SUICIDE is doubly interesting to physicians, not only as they study it in its professional aspects and psychological bearings, but from the fact that, according to recent statistics, probably more physicians than any other class of men die by their own hands, lawyers coming next, and the liberal professions as a whole furnishing about one-fifth of all cases.

Various causes have been suggested to account for this seemingly abnormal development of the suicidal tendency among doctors, some ascribing it to overcrowding and the struggle for sufficient work to maintain life in such a way as to make existence inviting; while others, with probably more reason, seek the explanation in the greater tendency among medical men to fall victims to opium, chloral, cocaine, and other drug habits. There is a bare possibility that greater philosophy exists among medical men of to-day than is to be found in other walks of life, and that, like the great minds of ancient Greece, the modern medical mind grasps the obscure virtue of the act under certain conditions. Is it too much to expect at the end of the nineteenth century that a wise physician, finding himself one of sixty in a community which can support but sixteen in comfort, will make away with himself for the benefit of the other fifty-nine, just as the inhabitants of the Isle of Ceos considered it a privilege and honor to poison themselves off when they grew old, so that the younger men could have a better chance?

Since suicide increases with education and civilization, it might be demonstrated that physicians, as a class, advance more rapidly in those directions than do others, and simply show their superiority by keeping at the head of the list. Unfortunately for such a theory, that of insanity (possibly the result of supposed civilizing influences) steps in, and destroys whatever of merit may attach to the act or to the fact of belonging to the class most given to its practice. Morselli speaks of "the known disposition of doctors to become mad."

Suicidal mania is undoubtedly traceable to hereditary predisposition in many cases, while it is fair to presume in others that a man whose father killed himself may become so possessed with the idea that he himself will do the same, that he is forced to the act to get rid of the idea. Such cases should be treated, and afford instances in which prophylactic medicine can and should assert itself. Even in monomania hope may be held out of permanent cure of the desire to die. Dr. Siébault told at the International Congress for Experimental Psychology, held in London last August, of his success in treating by hypnotic suggestion a woman with strong suicidal mania. To accomplish the desired result by this means, repeated sittings must be had, and the suggestion of cure made over and over again. In the instance recorded, fifty-eight séances of forty-five minutes each resulted in freeing the woman of all her self-destroying tendencies. The opposite of this effect may be inadvertently produced in apparently sane persons, thus making suicide by suggestion a possibility. The story told by Sir Charles Bell may be recalled in this connection. On one occasion the noted surgeon, while being shaved, related the story of a suicide whose throat he had just stitched up at the Middlesex Hospital, and explained how the fellow had failed to give a death-cut owing to his lack of knowledge of the vital parts, and pointed out the region in which the vessels would have been severed. The barber at once excused himself for a moment, and entering an adjoining room drew his razor through the proper anatomical region to assure success.

Now, while this certainly has nothing to do with hypnotism, it is a kind of suggestion like that which in automatic suicide, or suicide by impulse causes one man to stab himself because his sight suddenly rests upon a dagger within reach, and another to jump from a high place where he has gone without the slightest idea of self-destruction or excuse for such an act. Some, from previous experience, know that they possess this peculiar weakness, and for fear of being unable to resist temptation, try never to trust themselves in situations which might suggest the act.

The method employed is frequently suggested by the occupation of the individual, and those religiously insane have now and then conceived and executed the idea of self-crucifixion. Only recently a man in or near Königsberg bound his legs together, drove nails through his feet into the ground, and, lying stretched out on his back, nailed his left hand to the ground and then stabbed himself repeatedly with the right. This recalls a similar but much more elaborate self-inflicted torture on the cross by a Naples shoemaker, who constructed for himself a cross of wood and arranged it in such a way with ropes that, after having nailed himself securely to it, he could cause it to slide from his bedroom window, under which he was found suspended the following morning not yet dead but delirious.

The would-be suicide is one of three things: a great philosopher, a crazy man, or a coward. If a philosopher, his philosophy is faulty, unless perhaps he is beyond all hope and doubt a burden to himself and to the community. If a lunatic, he must receive careful treatment, and his reasoning powers be trained to follow out ideas which will take him out of himself and give him some interest in life.

The whole treatment is prophylactic, but much may be accomplished, and possibly hypnotism may prove a valuable aid in its accomplishment. Much might be done to give force to the character of the coward, but when a man becomes so afraid to face the world with its trials, disappointments, and distressing problems that he prefers to solve them all by getting out, perhaps it is as well to let him go.

MEDICAL STUDENTS AND THEIR JOURNALS.

The *Hospital Gazette and Students' Journal* becomes *The Medical Times and Hospital Gazette*. Thus ends, after twenty odd years, an attempt to publish a medical journal for medical students. The field seemed promising, but the student is too poor, too indifferent, or too busy to read a special paper printed in his behalf. This seems a little odd—and is not an altogether praiseworthy state of affairs.

There are, for example, fifteen thousand medical students in the country who, for three or four years, have common interests and aims. In every academic college with four or five hundred students, at least two periodicals are usually supported. The cause of the literary apathy of medical students lies a good deal in the fact that the great majority of them are not primarily students, in any sense. They study hard enough, because they have to do so. Having got their diplomas, they cease to read any thing but a current journal; and their library, at the end of six years, has increased about ten volumes.

An influence which would encourage students to read and study more, and to buy books and journals liberally, would have a most beneficent effect. If a man does not acquire habits of studiousness and thoroughness in early life, he never will.

HICCOUGH.

Mr. W. Langford Symes laments that systemic writers treat so lightly and unsatisfactorily of hiccough. This was not so in earlier days, when Ash and Good and Graves discoursed learnedly and at length concerning it. Mr. Symes himself reports the case of an old gentleman who, in ten days, hiccoughed 257,520 times, and was pretty well knocked out before relief was obtained. Mr. Symes's case is beaten by that of Dr. Liveing, whose patient, a girl of twelve, hiccoughed for three years; and by a patient of Dr. Foot ("Cyclopædia of Practical Medicine," 1833), in which a boy hiccoughed at the rate of fourteen times a minute for twenty-six weeks. Dr. Good has recorded cases of eight and twelve days' duration, and Dr. Henry Kennedy one that lasted seven months. The causes in these and other cases of chronic hiccough are of the most diverse character. Dr. Ash mentions, among "idiopathic" influences, laughing, crying, vomiting, bleeding, purging, and the shock of operations. Mr. Symes's case was thought to be the expression of a gouty poison.

As symptomatic causes, he instances fevers, gastritis, enteritis, hepatitis, peritonitis, hernia, worms, teething, jaundice, hysteria, myelitis, epilepsy, gout, rheumatism, and ague. Hiccough is said to be a good sign in the algid state of cholera; but occurring at the termination of severe fevers it is usually of very serious portent.

Hiccough is looked upon as usually a reflex spasm, involving the diaphragm through the phrenic nerve, and the adductors of the larynx through the recurrent laryngeal.

In its mechanism, says Mr. Symes, the diaphragm either receives the first impression, as the phrenic apparently responds more quickly than the recurrent laryngeal, or, receiving a stronger impulse, overcomes that of the recurrent nerve; for one finds that frequently the diaphragm contracts before the glottis is perfectly closed, a noise being thus produced in the larynx from some air leaking into the trachea. When, however, as occasionally happens, the glottis is securely shut, no noise accompanies it, and this of necessity, by tending to produce a potential vacuum in the thorax—a most unnatural condition—is a greater shock to the patient; and therefore we can understand how it is that a noiseless hiccough is the most distressing. Whether it be in time or strength of current that the laryngeal is behind the phrenic, or whether the impressions reach the diaphragm by a shorter route than by way of the cervical spine, or whether the contraction of the diaphragm overcomes that of the laryngeal muscles even when acting in unison, or whether it be the acts of inspiration or expiration which are influential in producing the noise in a semi-closed glottis, are interesting points in physiology which appear open to debate.

Mr. Symes seems to think that the phrenic nerve is not concerned in the production of hiccough, but that it is due to an involvement of sympathetic fibres from the semilunar ganglia. It is not explained how such fibres can cause a muscular contraction of the diaphragm.

The treatment of hiccough is divided into (1) the empirical; (2) the antispasmodic; and (3) the physiological.

Under the first heading would come almost every known drug or household remedy, of which the most efficacious are very frequent acts of swallowing raw whiskey, vinegar, "Eau de Melisse," hot brandy punch; or a mustard blister over the epigastrium.

Of antispasmodic remedies chloral hydrate was used with success in Mr. Symes's case. It might be replaced by such as nitrite of amyl, Calabar bean, cocain, hydrocyanic acid, atropin, morphin, or nicotin.

The physiological treatment depends upon an accurate diagnosis of the conditions under which hiccough occurs.

In this connection we might refer to an obstinate case reported by Dr. Belt, in the Record, which was cured by pressure on the supra-orbital nerves. In other cases cure has been brought about by extension of the trunk.

THE PREDISPOSITION TO CHOLERA.

It is quite generally agreed that while the cholera bacillus is essential to cholera, there must be also a suitable soil, or the organism cannot develop and do its work. The injection of large amounts of the specific bacilli, recently, by Professor Pettenkofer, has led to renewed interest in the nature and importance of the "soil." Quite *a propos* of this comes a paper by Dr. M. Rekowski, in the *Archives of Biological Sciences*, published at St. Petersburg. Dr. Rekowski thinks that the healthy human body does not furnish a congenial ground for the specific bacillus.

Out of thirty-nine persons who died of cholera, and were examined at the Hospital of St. Peter and St. Paul, in 1892, mostly of the pauper class, the following results were found, as to the presence of other diseases:

	Cases.	Per cent.
Nephritis chronica interstitialis	35	90
Dilatatio ventriculi	28	70
Sclerosis cranii	18	45
Cirrhosis hepatis	16	40
Gastritis glandularis	15	37
Pleuritis adhesiva	8	20
Atheroma aortæ et arteriarum cerebri	7	17
Endocarditis vegetativa	4	10
Pachymeningitis	3	7·5

In twenty-one women where autopsies were made, abortion was found to have occurred seven times.

It appears that Bright's disease, gastric troubles, cirrhosis of the liver, and abortions, alcoholism, and inanition, favor the development of cholera.

In this connection it may be stated, however, that Drs. Guttmann and Emmerich assert that cholera was really produced in Professor Pettenkofer by the bacilli which he swallowed. The proof they find in the fact that similar doses of the bacilli were taken by Dr. Guttmann; a slight diarrhœa resulted, there being bacilli in the stools. His blood-serum was then taken and found to immunize guinea-pigs against cholera, acting just like the serum of a person who has had a severe attack.

THE YOUTHFUL ABDOMINAL SPECIALIST.

In the course of a recent address Dr. Joseph Eastman, of Indianapolis (*Indiana Medical Journal*, December, 1892), scores the pretentious utterances of certain self-constituted specialists, as follows:

"How much of our current literature comes from those who write before they practice? How much from doctors who practice before they write; and what is the real motive which prompts the writer? Is it to place upon the altar of Science the tithes of his experience? If so, have they been tested in the crucible of truth, and is he giving us only the atom of gold which he has found among the dross? or is our embryonic specialist intoxicated with the little knowledge gained by reading, plus that obtained by his maiden efforts in operating; and, like the bumble-bee, largest when he first emerges from the comb, 'seeking to be heard for his much speaking?' If the latter is true, the average student must be wide awake to winnow the wheat from the chaff, when the literature of abdominal surgery is burdened with productions from those who have little surgical aptitude, less originality, and still less wisdom born of experience."

He then asks with much force: "What of the adventurer who, with little experience, seeks to achieve fame by writing up his maiden efforts in operating? When one seeks recognition as an operator or teacher, we have a right to know the reasons they have for the faith they would teach. The facts seem to warrant the assertion that some of the current literature is dangerous. There are many things contained in the literature of what is now an established specialty which would seem to indicate that the writers were not willing to depend upon merit for professional preferment."

Another point to which he invites attention is what is meant when the statement is made that A or B has made so many operations without a death. One instinctively asks: "Did the patients simply not die on the operating-table? Did they rally from the shock, live until the sutures were removed, regain their feet, and was their condition made better or worse by the operation?" If the statement accompanied these reports as to what is meant by the words "without a death," "with success," etc., the truthful operator would have less hesitancy in comparing his record with the truthless.

He recalls, like most of us, many cases where practitioners, anxious to obtain the prestige presumably gained by abdominal section, have ventured to open the swollen abdomen with no definite idea as to what they were going after, where they were going to locate it, or what they were going to do with it after they had found it. After opening the abdomen freely, with the hope that they might see something which the fingers had not been able to feel, as their fingers had taught them no more about the abdominal viscera than the fingers taught the obstetrician in his first examination, they found the intestines distended with gas, piled up in formidable stacks over the abdomen, and even falling down on the table. Their position was something like the man who attempted to repair the clock. He had no difficulty in taking the clock to pieces, but when he attempted to put it together again he imagined he had wheels enough for fourteen clocks. So the amateur operator would believe there were intestines enough to fill fourteen men or women.

Alluding to the quiet work and worth of many really conscientious men, he points out that reports of their successes are rarely seen in print. They are unwilling to compete with the modern hustlers, with their loud declarations of success in societies and journals, aided by sycophants whom they employ to write their praise. Our literature has its good and bad teachings coming from those high and low in the profession—coming from those hustled into notoriety by cliques and rings, and coming from those manfully struggling against many obstacles thrown in their way.

Dr. Eastman expresses what all honest men feel to be true, namely, that the profession, as a whole, is not elevated by the published successes of alleged specialists, fresh from college, the ink on whose diplomas has scarcely had time to dry. Medicine will never again be able to dispense with specialists. But let us ask that this title be well-earned by years of faithful work, and not loosely granted to every tyro who chooses to assume it.

Bow-legs.—Dr. A. E. Hoadley, in a clinical lecture recently delivered, concluded as follows in respect to bow-legs (*Chicago Clinical Review*): 1. Rugged and rapid development produces bow-legs, and more commonly straight legs, which will uniformly correct themselves without assistance. 2. The severe forms of ordinary bow-legs, especially where the joint itself partakes largely of the deformity, will require treatment by restraining and corrective force. 3. The prognosis, in the ordinary forms of bow-legs, is very favorable under the influence of mild corrective force. 4. The prognosis in rachitic bow-legs is unfavorable, and when of long standing is practically not amenable to treatment by gradual corrective force, and therefore should be corrected by osteotomy. The rachitis itself requires the most careful and comprehensive constitutional treatment. 5. The anatomical arrangement of muscles favors the spontaneous correction of bow-legs, and the biceps is the most important in the exercise of this corrective force. In the opposite condition, or knock-knee, there are no opposing muscles that can act as correctors of the deformity. 6. The strong contrast between these two conditions, bow-legs with a tendency to recover and knock-knee with a tendency to progression and difficulty of correction, is due entirely to the anatomical arrangement of the muscles.

News of the Week.

St. Luke's Hospital, Chicago.—An orthopedic service has been established in St. Luke's Free Hospital, Chicago, and Dr. John Ridlon has been appointed attending orthopedic surgeon.

West End Medical Society.—At the annual meeting of this Society, held Saturday, February 4, 1893, the following officers were elected for the year 1893: *President*, Dr. George W. Leonard; *Vice-President*, Dr. J. M. Kennedy; *Recording Secretary*, Dr. F. Spencer Halsey; *Corresponding Secretary*, Dr. J. F. Blodgett; *Treasurer*, S. V. Ten Eyck; *Pathologist*, Dr. Charles N. Dowd.

The Twelfth German Congress for Internal Medicine will be held in Wiesbaden, April 12 to 15, 1893, under the presidency of Dr. Immermann, of Basle. The subjects for discussion will be: 1, Cholera, introduced by Drs. Rumpf, of Hamburg, and Gaffky, of Giessen; 2, The Traumatic Neuroses, by Drs. Strümpell, of Erlangen, and Wernicke, of Breslau. Papers will also be read by v. Ziemssen, on "Parenchymatous Injections in Diseases of the Tonsils;" Emmerich, on the "Preparation, Preservation, and Application of the Immune Proteïdins in the Preventive Inoculation and Cure of Infectious Diseases;" Adamkiewicz, on "Cancer and its Treatment;" v. Jaksch, on the "Chemistry of the Blood," v. Mering, on the "Functions of the Stomach;" Fleiner, on the "Treatment of Certain Irritations and Hemorrhage of the Stomach;" Pollatschek, on the "Question of the Laxative Properties of the Carlsbad Waters;" Rosenfeld, on the "Action of Phloridzin;" Koeppe, on "Examinations of the Blood in Elevated Regions." The permanent Secretary of the Congress is Dr. Emil Pfeiffer, of Wiesbaden.

The Cleveland (O.) Medical Society was organized on February 3, 1893, with a charter list of one hundred and twelve physicians. The officers for the following year are: *President*, Dr. W. J. Scott; *Vice-Presidents*, Dr. Alvin Eyer, Dr. J. F. Armstrong; *Secretary*, Dr. Harold T. Clapp; *Treasurer*, Dr. N. Stone Scott; *Censors*, Dr. C. B. Parker, Dr. E. J. Cutler, Dr. H. M. Brainerd. The regular meetings of the Society will occur semi-monthly.

A Practical Course in Bacteriology will be given at the Hoagland Laboratory, Brooklyn, during the months of April and May, 1893, commencing on Monday, April 3d, by Dr. George M. Sternberg, U. S. Army, Director of the Laboratory, and Dr. E. H. Wilson, Associate in the Department of Bacteriology. Special attention will be given to the most important pathogenic bacteria, and also to the methods of studying bacteria in the air, in water, and in the soil. In connection with the Laboratory course Dr. Sternberg will give a series of lectures on Wednesday and Saturday evenings, during the months of April and May. These lectures will be largely illustrated by lantern projections of photomicrographs, test-tube cultures, etc.

A Medical Student at Leipsic has been sentenced to two and a half years confinement in a fortress for killing a physician in a duel.

A Great Place for Eye-doctors.—There are thirty-three ophthalmologists located in Denver, and other specialists in proportionate numbers; most of them attracted to that city by the salubrity of the climate and their own physical ailments. Under such conditions there is not likely to be much of a rush of business for everyone.

A Hard Cough.—An Englishman aged fifty-four, a patient of Dr. J. T. Charles Nash, coughed so hard that he broke his sixth rib.

A New Medical College.—A bill has been introduced into the Legislature at Albany, and has, we learn, passed both houses, incorporating the Bayard Homœopathic Medical College.

A Bogus Medical College.—The New York *Herald* has done the community good service in exposing the existence of a bogus medical college. The name of the institution, as given, was the Excelsior Medical College. It was located apparently in a small down-town hotel. Its charter was obtained in Massachusetts. The reporter got a medical degree in a week by paying the sum of $50.

Annexation of the Chicago Medical Schools to the University of Chicago has come to a standstill; lacking money on one side and some inclination on the other. It will probably be consummated, however.—*Medical Recorder.*

The Number of Deaths from typhoid fever in Chicago during the past year was 1,479, a little better showing than in 1891. In New York, which is about fifty per cent. larger, the number was 400.

Honors to a Great Physiologist.—Professor Maurice Schiff, of Geneva, celebrated his seventieth birthday on January 28th. The occasion was taken to do honor to the scientist who has added so much to biological knowledge, but who was driven from his professorial chair in Florence, seventeen years ago, by the anti-vivisectionists. His successor at Florence, Professor Cavazza, at the instance of the Florentine Academy, drew up the following letter. It is an admirable specimen of pure Latinity, but we give it in English for the benefit of a certain percentage of our readers who are less at ease with Latin than in days gone by: "To Maurice Schiff, formerly Professor in Florence, now in Geneva, on January 28, 1893, celebrating his seventieth birthday. Among all Italians, and particularly among ourselves, most honored sir, there abides so grateful a remembrance of you that no distance of time or place can change or remove it. For in our mind's eye we see you assiduously engaged in scientific research; we picture you in thought, enriching day by day your young audiences with knowledge and example; we follow you with admiration as you publish for the good of mankind whatever you have ascertained and divined; finally, rejoicing as you do in old age itself, which to the rest of mankind is a penance, we hold you to be truly and deservedly blessed. All this we desire to convey to you by letter, that, amid the lustre and pageant of your jubilee, our congratulations in your honor might not be wanting. You, who have ever despised the clamor, the vain abuse of the vulgar, will vouchsafe us a more than full measure of joy if you will kindly admit to your mind and cherish in your memory the unanimous congratulations of your friends and colleagues on the honor and dignity you have attained. Be your happiness ours!"

There has been of late a shocking prevalence of deaths due to abortions produced in order to prevent the results of pregnancy and conceal the evidence of crime. Nearly twenty cases have been reported within a short time.

Legislation at Albany.—Bills have been introduced into the State legislature to prevent the purchase of "butterine" by State institutions. So far as careful tests enable one to tell, good artificial butter is a palatable and nutritious article of diet, and there is no reason why it should be legislated against, except to please certain voters. A number of petitions have been received by the Senate against the use of cocaine and chloral. A bill has been introduced to erect a bureau of public baths under the Board of Health, with a $3,000 superintendent and six new baths. A bill has also been introduced to abolish the coroner's office, and another to authorize the State to experiment in treating inebriates with the Garten cure.

Heating by Electricity.—MM. Henriot and Lebrasseur, of Havre, have invented an apparatus for heating and cooking by means of electricity. It consists essentially of rows of copper wire resting upon a bed of firebrick, the apparatus being made of various shapes and sizes according to the use to which it is to be put.

The Pennsylvania State Medical Society will hold its annual meeting in Williamsport, May 16th, 17th, 18th, and 19th. Those intending to read papers must submit the titles to the Chairman of the Committee of Arrangements, Dr. H. G. McCormick, Williamsport, Pa., not later than March 1st.

The Duke of Newcastle, who was one of the vice-presidents of the Anti-vivisection Society, had the temerity to consult Mr. Victor Horsley on several occasions. As Mr. Horsley is a scientist enjoying a deservedly high reputation, and has exposed some of the "inaccuracies" of Miss Cobbe's anti-vivisectional writings, he is under the ban of the Society. The Duke of Newcastle has accordingly been deposed for daring to consult with a man whom the antis had denounced. We congratulate the noble duke upon his good luck.

A Pasteur Institute is about to be established in Lisbon.

The Berlin Health Department.—A site has been purchased, for $170,000, in the Klopstockstrasse, in Berlin, for the erection of new buildings for the housing of the Imperial Public Health Department.

University of Berlin.—The total number of students in the University of Berlin during the current semester is 4,876, of whom 1,254 belong to the medical faculty.

Dr. Knapp, of Ottawa, Kan., died at his home in that city on December 30th. He was for nineteen years superintendent of the Kansas State Insane Asylum at Ossawatomie.

A Physician was represented in Egyptian hieroglyphics by the picture of a duck. Our advices do not state whether this was because he was looked upon as a quack, or because he was a favorite among the fair sex.

Aristol as a Local Anæsthetic.—Dr. S. M. Riggs, of Muscotah, has made some interesting experiments in the use of aristol as a local anæsthetic. A hypodermic injection of a solution in glycerine was made into a kitten with the result of complete local anæsthesia. The animal made no resistance to a cutting operation, and was apparently unaware of being injured.—*Kansas Medical Journal.*

A Case of Hiccough.—The following suggestive case is reported in the *Medical Press:* A man, aged twenty-seven, came under treatment for incessant hiccough, which continued night and day; the affection had lasted a week, and the patient was thoroughly exhausted from loss of sleep and the pain and soreness produced by the constant contractions of the diaphragm. No remedies which had been tried caused more than temporary relief, not even electricity applied to the epigastrium and to the phrenic nerve. On examination it was found that the stomach was considerably dilated, and contained a large quantity of fluid. No signs of obstruction were present, or of a tumor. Accordingly a siphon-tube was introduced into the stomach and the organ was thoroughly washed out. At least two quarts more of fluid were removed than had been introduced through the tube. After this procedure the hiccough entirely ceased, and the patient had a good night's sleep, the first in sixteen days. Two days later he was as well as ever, without any return of the trouble.

The Employment of Ambulances in War.—Bishop Bubics, of Kassa, has recently published the correspondence of a Venetian volunteer in the allied European army which laid siege to Buda, then in the hands of the Turks, in 1686, and took it in the following year. From this work it would appear that, owing to the initiative of certain Roman Catholic dignitaries, ambulances were organized, and surgical assistance provided during the siege. This is probably one of the earliest instances of organization of ambulances in war, and of the provision of surgical assistance by an agency other than the surgeons attached to regiments.—*British Medical Journal.*

Dr. Achille Sacchi.—A memorial tablet has recently been placed in the portico of the Ducal Palace at Mantua in honor of Dr. Achille Sacchi, who served as surgeon under Garibaldi in Italy's wars of independence.

Inspector-General J. R. Taylor, of the British Army, died recently at the age of eighty-two. He entered the army in 1833, and was retired, after an active service in the Crimea and elsewhere, in 1863. He was an honorary surgeon to the Queen.

The Comparative Size of Ancient and Modern Romans.—We learn from *The Lancet,* that an English mining company the other day, in the Alpine commune of Bovegno (Province of Brescia), came upon a shaft, evidently of Roman excavation, across the mouth of which had been laid a wooden beam which, on contact with the air, crumbled immediately into dust. Letting themselves down into the shaft, some of the employees found at the bottom a great number of human skeletons, the osseous framework of men of almost gigantic build, and, not far from these, the entrance to an imperfectly cleared out gallery, in which lay scattered about pieces of a mineral containing silver in combination with lead (*plumbum argentiferum*). This had doubtless been an ancient Roman mine in which the work of excavation had been performed by men of the neighboring hill tribes, a company of whom had probably been buried alive by a landslip

from the mountain above. The skeletons are being carefully preserved for the purpose of checking (possibly confirming) Professor Mosso's recent conclusions as to the comparative strength and stature of men of the Roman epoch and those of the present day.

When Doctors were Scarce.—Six hundred years ago Paris had over two hundred thousand inhabitants, and only six physicians. One hundred years ago it had half a million inhabitants, and one hundred and seventy-two physicians. A law then in force, that no physician should visit a patient unless requested to do so, would seem to have been superfluous.

A Cooking-school Exhibit, under the direction of Miss Juliet Corson, will be one of the features of special interest to physicians and hygienists at the Columbian Exhibition. The exhibit is open to every article or substance used by housekeepers, or suitable for their use, such as choice preparations of food, specialties for the use of invalids and children, household utensils and fittings, labor-saving devices, and all matters of use and value to housekeepers, including publications on household science and domestic economy in all their branches, sanitation, and sanitary dietetics, all matters appertaining to women's household labors and the care of the family in health and illness. As there is no fund provided for this exhibit, Miss Corson has to rely upon contributions of money and material from manufacturers of food products and the public. All communications and subscriptions may be sent to Miss Juliet Corson, 1122 Broadway, New York City. Miss Corson proposes to publish during the fair a text-book for nurses' training-schools, in which will be given full directions for preparing dishes for invalids.

Pan-American Medical Congress.—The Section on Diseases of the Mind and Nervous System of the Congress has been definitely organized and the preliminary notice issued. Many valuable papers have been already promised, but the organizers of the Section hope for still more from those interested in this subject. They extend a cordial invitation to the medical profession of the two Americas to co-operate in promoting the success of the Section. This co-operation may be effected by adherence as members, by the preparation of papers to be read, and by letters of suggestion or advice addressed to the president, or to the English-speaking secretary. The Executive President is Dr. C. H. Hughes, 500 N. Jefferson Avenue, St. Louis, Mo.; the English-speaking Secretary, Dr. A. B. Richardson, Columbus, O.; and the Spanish-speaking Secretary, Dr. M. G. Echeverria, Key West, Fla.

Fatal Infection by a Barber's Razor.—A death is reported in this city, due to septic infection from the cut of a razor. Concerning this the *Sun* says, truly: "It is dangerous to get shaved by an inexpert, clumsy-handed, negligent, or groggy barber. It is dangerous to get shaved in any barber's shop in which the lather is not perfectly pure, or in which any of the tonsorial appliances are unclean. The man who would guard against danger ought to have a lather mug and brush for himself, ought not to let his face be touched by a sponge that is in general use, and ought not to patronize a barber who will use the same towel for different customers."

Examinations for the Marine Hospital Service.—A Board of Officers will be convened at Washington, March 20, 1893, for the purpose of examining applicants for admission to the grade of Assistant Surgeon in the United States Marine Hospital Service. Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from responsible persons as to character. The following is the usual order of the examination: 1, Physical; 2, written; 3, oral; 4, clinical. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography by the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical examination is conducted at a hospital, and, when practicable, candidates are required to perform surgical operations on the cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order, as vacancies occur. Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. After four years' service, Assistant Surgeons are entitled to examination for promotion to the grade of Past Assistant Surgeon. Promotion to the grade of surgeon is made according to seniority, and after due examination, as vacancies occur in that grade. Assistant Surgeons receive sixteen hundred dollars, Passed Assistant Surgeons, eighteen hundred dollars; and Surgeons, twenty-five hundred dollars a year. When quarters are not provided, commutation at the rate of thirty, forty, or fifty dollars a month, according to grade, is allowed. All grades above that of Assistant Surgeon receive longevity pay, ten per centum in addition to the regular salary for every five years' service, up to forty per centum after twenty years' service. The tenure of office is permanent. Officers travelling under orders are allowed actual expenses.

The University of California.—There is a bill before the present Legislature asking for $250,000 to erect a suitable central building for the various departments of the University of California, which are of necessity located in San Francisco.

The American Surgical Association will hold its next annual meeting in Buffalo, on May 30, 31, and June 1, 1893.

An Old Story but a Good One.—"Gentlemen, you do not use your faculties of observation," said an old professor, addressing his class. Here he pushed forward a gallipot containing a chemical of exceedingly offensive smell. "When I was a student," he continued, "I used my sense of taste," and with that he dipped his finger in the gallipot and then put his finger in his mouth. "Taste it, gentlemen, taste it," said the professor, "and exercise your perceptive faculties." The gallipot was pushed toward the reluctant class one by one. The students resolutely dipped their fingers into the concoction, and with many a wry face sucked the abomination from their

fingers. "Gentlemen, gentlemen," said the professor, "I must repeat that you do not use your faculties of observation, for had you looked more closely at what I was doing you would have seen that the finger which I put in my mouth was not the finger I dipped in the gallipot."

The London Post-Graduate Course is growing in popularity, the entries in 1890 being 121; in 1891, 172, and in 1892 reaching 223. Twelve courses are now given at ten hospitals. The students come from Great Britain and her dependencies, with a few from the United States.

Proprietary Medicines Containing Poison.—A bill has been introduced in the Massachusetts Legislature, and argued in committee, requiring that all secret proprietary medicines containing certain poisonous substances shall be labelled with the name, quantity, and antidote of such poisons. There are unfortunately too many opponents of such a bill to make its passage probable.—*Boston Medical and Surgical Journal.*

Returning to His First Love.—In a recent address on antisepsis, Sir Joseph Lister returns to the use of carbolic acid as on the whole the most convenient and effectual antiseptic. He enumerates its advantages, and points out methods of obviating some of the inconveniences which under the earlier methods attended its use.

Dr. Oliver Wendell Holmes and the British Medical Association.—At the monthly meeting of the Victorian Branch of the British Medical Association, held on November 16, 1892, the following letter from Dr. Oliver Wendell Holmes was read. It was in reply to an address which the members of the Branch had sent to the poet-physician on the occasion of his eighty-third birthday: "Boston, 296 Beacon Street, September 10, 1892. To the Victorian Branch of the British Medical Association.—The greeting which you sent me is one of the highest honors I have ever received. I accept and most gratefully acknowledge it, only wishing that I felt more worthy of being so signally distinguished. With my best wishes for the continued prosperity of your noble Association, I am, very respectfully and cordially yours, OLIVER WENDELL HOLMES."

The Lady or the Worm?—The following appears in a Chicago paper: "NOTICE—All parties welcome! Young lady of twenty-four years of age, after long trouble, has passed a tape-worm of thirty-two yards long. Can be seen at ——, 2d flat front. Admission, 25 to 50 cents. Mrs. W. D. ——."

Another Lunatic Asylum Burned.—The insane asylum of the Strafford County workhouse, near Dover, N. H., was burned to the ground on February 9th, and forty-four of the inmates lost their lives. The fire was caused, it is said, by a pyromaniac.

Annual Dinner of the New York Polyclinic.—The Faculty of the New York Polyclinic entertained the members of the Clinical Staff at the Windsor on Thursday evening, February 16th, covers being laid for 125. The occasion was a highly enjoyable one, and served to increase the *esprit de corps* of the institution as well as to promote more intimate relations between the teachers in the different departments. The following toasts were responded to: "The Polyclinic," by Dr. Landon Carter Gray: "The Faculty," by Dr. Edward B. Bronson: "The Clinical Staff," by Dr. John H. Claiborne; "Clinical Instruction," by Dr. L. Emmett Holt; "The Trustees," by Charles Coudert, Esq.; "Our Spiritual Allies," by Rev. Abbott E. Kittredge, D.D. Drs. Gerster and Pooley also made witty speeches. The President, Dr. John A. Wyeth, acted as toast-master, introducing each speaker with a few graceful remarks.

American Medical Students in Germany do not engage in the exciting pastime of duelling, but dearly love to be present at the sport. So writes a Berlin correspondent of *Harper's Weekly*. If this is so, American students should be very much ashamed of themselves. They should have the manliness either to fight or stay away, and not become patrons of a sport they are afraid to engage in. We are told that American students are admitted to the *Verbindungen*, with the proviso that they need not engage in duels.

A New Electro-therapeutic Journal.—The French have now three journals devoted to electro-therapeutics, the latest being the *Archives d'Électricité médicale, expérimentale et clinique*. It is edited by Dr. J. Bergonié.

The Official Languages at the Pan-American Medical Congress.—The *Deutsche Medicinische Wochenschrift* of January 12, 1893, p. 47, contains an open letter from the distinguished German surgeon Czerny (who is an honorary member of the American Medical Association), addressed to our own Mastin, politely declining an invitation to attend and participate in the sessions of the Pan-American Medical Congress, because, as he quotes, "the languages of the Congress shall be Spanish, French, Portuguese, and English," "although remarks in any other language will be permitted, provided one of the members present expresses a willingness to make a translation into one of the four official languages."

Where Shakespeare Got his Medical Learning.—Dr. R. N. Hawley, in a paper recently read before the Milwaukee Medical Society, while admitting the probable influence of Dr. Hall, cites Dr. B. W. Richardson (*Lancet*) to the effect that Helkiah Crooke published in 1615 what was probably the first great work on anatomy published in the English language. It contains over one thousand pages, imperial quarto, and is illustrated by numerous drawings of anatomical subjects. It contains, besides anatomy, various passages of a physiological and psychological nature. In this work the membranes of the brain are well defined and described, and the pia mater takes a very distinct place. The man who printed the works of Crooke was W. Jaggard, of the Barbican, London, who also was the printer for Shakespeare. Within easy walking distance from the Globe Theatre, the scene of the great William's managerial glory, was the printing office of Jaggard, where the plates and letter-press of Crooke would for long seasons be the most remarkable presswork of the time. To that office the indefatigable playwright would often be drawn by his own business, and there he could hardly fail to see unfolded before him the anatomy of man, from a sure source and in just the form that would most readily appeal to his ever-absorbing mind. The closer this book and the book of the plays are read together, the more clearly it is detected where and how the dramatist became the student of anatomy.—*Medical Standard.*

Reviews and Notices of Books.

Electricity in Diseases of Women and Obstetrics. By Franklin H. Martin, M.D., Professor of Gynecology, Post-graduate Medical School of Chicago, etc. 1892. 8vo, pp. 252. Chicago: W. T. Keener.

The author is a firm and consistent believer in his subject, in that he is conscientious, painstaking, and earnest in his application of practice to principles. A good part of the work is taken up with the description of apparatus and of electrical technique which, though not very interesting reading, is of great importance as a guide to the practitioner. Electricity has its application to the department of gynecology as well as to other departments in surgery and medicine, and the author has labored very successfully to show how far the usual limits can be extended by the use of new apparatus and improvements in methods of application.

The Medical News Visiting List. Philadelphia: Lea Brothers & Co.

The list for 1893 contains the usual amount of information on urinary examination, dosage, artificial respiration, therapeutic reminders, poisons and antidotes, etc. It is conveniently arranged for ready reference, with thumb-letter index.

Le Rachitisme. Par Dr. J. Comby, Médecin des Hôpitaux de Paris; Médecin des Disp. pour Enfants Malades de la Soc. Phil. Paris: Rueffet et Cie. 1892.

This little volume of the *Bibliothèque médicale*, published under the direction of Charcot and Debove, presents a fair *résumé* of what is known to-day concerning rachitis. There have occurred no great changes in the pathology or pathogeny of the disease during recent years, and advances in bacteriology have had no influence upon it or its treatment. Still the subject remains one of much interest, and the work before us bears evidence of having been written by one especially interested in it. The introductory chapter gives an entertaining historic review from the time of the appearance of Glisson's work in 1650. Numerous wood-cut illustrations are scattered through the two hundred pages of text.

Les Mementos thérapeutiques des Praticiens. Publiés sous la direction de Henri Huchard, Médecin de l'hôpital Bichat. Par Charles Eloy, Rédacteur en chef de la Revue générale de Clinique et de Thérapeutique. Tome Premier. Paris. 1891.

A number of collaborators, including Barié, Brocq, Mauriac, and Renault, have aided the editor in placing before their professional brothers a *résumé* of a clinical nature bearing upon the treatment of disease in conformity with the latest acquisitions of medical science. It is proposed to continue the publication of such "mementos" until the series includes all medical, surgical, and obstetrical subjects. The present volume by itself, though filled with useful knowledge, valuable hints, and many excellent formulæ, appears fragmentary and lacking in order as to the arrangement of subjects. When the whole series is complete it will doubtless be a valuable therapeutic reference book, but the single volume appears more like a collection of short papers on the treatment of a limited number of diseases.

Rest and Pain, a Course of Lectures. By the late John Hilton, F.R.S., F.R.C.S., etc. Edited by W. H. A. Jacobson, M.A., M.B., etc. Fifth Edition. Pp. 514. London and New York: George Bell & Son.

The first edition of this classical work was published in 1860, and its arrival was the signal for the appearance of an immense deal of commendatory comment. Since then numerous other editions have appeared, in obedience to a demand which may be described as international. In his preface to this, the fifth edition, the editor states that no alterations have been made, since the death of the accomplished author renders it impossible to obtain authoritative indorsement for such changes in the text. This we believe to be sound reasoning. There is, indeed, far too much inclination on the part of those of pedantic mind to fume away any slight error, any apparent inconsistency in the works of medical writers who perhaps have been dead but a few years. All this misapplication of the editorial scissors might have been spared, had he who wielded it but paused to remember how easily the excision of a paragraph may rob an argument of its pith, or how a whole book may be altered in effect by a sophomoric attempt at modernization.

The truth is there are some things in all literatures which must stand rather by the things they suggest, the atmosphere that envelops them, rather than through immutability of statement. Such a book is that of Mr. Hilton, which, whatever the changes in mere surgical detail time may bring forth, must ever remain a classic because of the sound methods of reasoning which it inculcates—methods to which Lord Bacon himself would have given enthusiastic assent.

To follow the gifted author of this classical presentation of the application of rest in the treatment of accidents and surgical diseases, would be fatiguing because supererogatory, the profession having long since familiarized itself with the teachings of Mr. Hilton in this important field. We must content ourselves with stating, then, that the present edition, both in the elegance of the impression and in point of accuracy, is all that could be desired.

Transactions of the American Gynecological Society. Vol. XVII., for the Year 1892.

This volume is larger than the average, and is full of interesting material covering the entire range of operative gynecology. Extirpation of the uterus, vaginal and abdominal, claims its due share of attention, and cœleotomy, the new term for laparotomy, is discussed in many of its phases. There is an excellent paper, well illustrated, on the operative treatment of umbilical hernia, and a very instructive discussion of the causes of inter-menstrual pain.

Diseases of the Skin. By George Thomas Jackson, M.D., Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York; Professor of Dermatology in the Woman's Medical College, etc.; with Fifty Illustrations. Philadelphia: Lea Brothers & Co. 1892.

This is essentially a ready reference handbook of the symptomatology, diagnosis, and treatment up to date of skin diseases, and glossary of terms used in dermatology by the older as well as recent writers, and by foreign as well as English authors. Most points in etiology have been omitted, and intricate and still undecided pathological problems have been left for the more pretentious works. There has been an open field for an alphabetical glossary of skin diseases for some time, and the present work, while not completely filling it, goes so far toward doing so that no further attempt in this line may be expected for some time. The system of pronunciation followed has been taken from Foster's Dictionary, as stated by the author in the preface, and if a sufficient following can be secured to give to such common terms even as eczema and boriasis their proper pronunciation, the efforts of the writer in this direction will be fruitful. Some subjects would seem to have received less attention than their importance warrants, but for a work of this kind which does not claim to be exhaustive, perhaps such fault should not be found. The alphabetic arrangement is so much more common-sense and practical than any attempt at scientific classification in the present state of uncertainty concerning many affections, that only words of the highest praise can be given the author for adopting it. The time is not yet ripe for such ultra-scientific

classification as those of Auspitz and Bronson mentioned in the text, and while so many etiological and pathological questions remain unsettled, others will do well to follow this author's example. This duodecimo volume of five hundred and fifty pages will aid the student in his efforts to acquire a knowledge of skin affections, but it will have to be supplemented by some text-book which goes more deeply into the subject. For the general practitioner it will be found a very good handbook to turn to in an emergency, and every dermatologist should have a copy in his collection.

Clinical Department.

SPRAINS—CONSEQUENCE—TREATMENT.

By A. L. BLESH, M.D.,

LOST SPRINGS, KAN.

Case I. *Sprain of Ankle-joint; Extensive Lacerations of Internal Ligament; Crushing and Bruising of Tissues.*—D. H——, male, aged twenty-four; laborer, of robust physique, while at work "feeding" a hay-press by pushing hay in with his foot, the latter was caught between the plunger and the framework of the feed-box. The force applied was very great. The framework caught his foot just below the external malleolus while the plunger at least one inch below the internal.

The consequence of great pressure, with the forces bearing this relation to each other, can easily be comprehended. Ligaments, fasciæ, connective tissue of tendon grooves—in fact, nearly all the tissues on the inner side of the ankle-joint were extensively torn and stretched. When first seen by me (four hours after accident), the foot was markedly everted. There was no fracture of either malleolus—the foot seemed simply lifted from its attachments to the inner malleolus, but its relation to the external had not been markedly altered except for the doubling upon itself. The tissues on each side were, of course, very much contused.

When I first saw the patient the ankle-joint was swollen to an immense size, from hemorrhage into the synovial sac and tissues. All landmarks were obliterated to the sight. Pain was almost unbearable, the joint was fixed with a rigid musculature.

Treatment.—The patient had had his foot immersed in cold water from the time it was injured until I first saw him. I forcibly straightened the foot, being careful to get it at right angles with the leg, and bandaged, padding out all the sites that should normally have been depressions, and which, of course, marked the spots of greatest swelling, with cotton-wool pads. The foot was now elevated and suspended by a swing from the ceiling. The pain was much diminished by this treatment. Twelve hours later the bandage was removed, and a plaster bandage was applied over the cotton pads in the same manner as mentioned above. With the foot thus immobilized, muscular spasm gradually subsided and pain was entirely relieved. At the end of three weeks the plaster was removed and it was noted that much of the swelling had gone and considerable voluntary motion was possible. Another plaster bandage was applied and allowed to remain for three more weeks. At the end of this time the swelling had largely subsided, but the muscles upon which the joint depended for stability as well as mobility were weak and untrustworthy. Inflammation, in its strictest sense, had not occurred at all, even though adhesions had formed limiting the degree of movement possible.

It is claimed that adhesions without inflammation is a pathological impossibility; but, on the other hand, we have the best of reasons for believing that it is possible. For example, in this sprain copious hemorrhage had taken place both within and without the joint cavity. Coagulation followed, then liquefaction preparatory to absorption. Absorption not being complete, a residue remained which subsequently became organized, giving rise to adhesions both intra- and extra-articular (Mansell-Moullin).

It can be truly said that up to this time there had been no inflammatory element present. There had been no elevation of surface temperature, none of the throbbing pain so indicative of inflammation, and no diffuse tenderness. So far as motion was possible in this case it was painless and smooth, but when half the arc of possible motion had been accomplished, movement was suddenly checked and pain became intense. There being no inflammation present I concluded to break up the adhesions by force, and again rest the joint for a few days. This was accordingly done without an anæsthetic, by taking the patient by surprise. The force required was considerable, and the adhesions parted with a very audible snap. The joint was now freely moved in all possible directions and a bandage (plaster) was applied. But slight swelling and tenderness followed. This bandage was left undisturbed for a few days and then removed, and massage and strictly passive motion used. Movement continued very free and was painless. At the end of four months the patient was able to walk with scarcely any appreciable limp, and with little or none of that feeling of insecurity so often present after severe joint sprains with much effusion and hemorrhage into the synovial sac.

Recovery at six month was complete.

Case II. *Sprain of Metatarso-phalangeal Articulation, together with the Tarsal Articulations; Dorsal Ligaments and Fasciæ Lacerated; Extensive Contusions.*—F. G——, male, aged twenty-two, farmer, robust physique. This foot was sprained, as Case I., in a hay-press. The toes were turned toward the plunger, and the framework of the machine caught the os calcis at the back of the heel. The foot was doubled upon itself and arched upward; ligaments, fasciæ, and even muscles over the dorsal aspect of the foot were extensively torn and bruised. Those on the plantar surface were also squeezed and bruised. Hemorrhage into synovial sacs, tendon-sheaths, and tissues was very extensive, as evidenced by the immediate large swelling.

I first saw the patient one half-hour after he received the injury. Swelling had then filled in and obliterated all landmarks, and the pain was intense.

Treatment.—Cold was immediately applied by pouring cold water over the foot until the skin became blanched and cool, and pain was greatly lessened. After well padding up the sites of normal depressions, a bandage was applied snugly.

The foot was suspended as in Case I., and after twenty-four hours a plaster bandage was put on. Swelling rapidly subsided, and at no time after the application of the plaster was there pain sufficient to cause any annoyance. After the first two weeks I changed the plaster every three days and tested motion. This at first was painful and limited, but gradually improved in both respects. At the end of six weeks the patient was allowed to use the foot, and at the present time (four months) his foot is entirely well.

No treatment in addition except the forcible breaking up of adhesions during the third week. No bad after-effects followed, though the usual precautionary splinting was dispensed with in this case.

Case III. *Old Sprain of Knee-joint; Formation of Adhesions; Partial Atrophy of Muscles of Leg and Thigh.*—Mr. W——,[1] aged about twenty-one, healthy. About a year before the patient was seen by us he had suffered a severe sprain of the knee-joint. There was great bruising of the soft tissues about the joint and severe hemorrhage in and about it. The joint had partially recovered, but, as often happens with sprains, when improvement had reached a certain stage it ceased. Motion was limited because of adhesions, probably of an intra- and extra-articular nature, and was painful. The leg was flexed at an angle of thirty-five degrees with the thigh. The muscles of the thigh and leg were atrophied, the joint was swollen, bluish, and cold. Upon every attempt to use

[1] This case occurred in the practice of Dr. Ketchersid, of Hope, Kan.

the limb acute exacerbations were excited, and it would swell and become very painful. The patient was anæsthetized by Dr. Uhls, and Dr. Ketchersid, assisted by the writer, broke up the adhesions. The limb was immobilized in plaster. This was changed in about two weeks for a splint with an extension rod behind, thus giving control over the joint. From the time the adhesions were broken up and joint immobilized, pain, which had been a constant factor before, was entirely absent. This pain had been due undoubtedly to the irritation caused by the constant stretching of adhesions in and about the joint, due to the constant moving of it. So soon as these were broken up and the joint placed at rest this symptom was entirely relieved and the joint went on to ultimate recovery.

Case IV. *Recurring Dislocation of Internal Semilunar Cartilage of Knee.*—H. Y——, aged twenty-six, male, laborer. When a boy of fifteen, while jumping with a "hop, skip, and jump," he suddenly felt a stab of acute pain and fell to the ground. The leg was flexed, knee locked, muscles rigid. Marked swelling followed, which subsided in a few days. During this time the leg remained flexed and muscles rigid.

On the fourth day, while manipulating it himself, he heard something click sharply, which was followed by intense momentary pain. When this subsided he noticed that the joint was again movable and painless and, with the exception of swelling and soreness, the joint seemed well again. This accident has frequently recurred since the time of the primary injury. A sharp blow on the toe with leg flexed and toe rotated outward is frequently sufficient to cause it.

The last time the injury occurred, the patient was sitting on the ground with the leg crossed. In attempting to raise himself, the weight of body was thrown on the well leg and the other was drawn from beneath. The toe of this limb struck the heel of the other foot while being withdrawn. The dislocation was immediate and with characteristic symptoms.

General Remarks.—*Structures Entering into the Formation of Joints.*—In the consideration of the sprains of joints it must never be forgotten that the bones, cartilages, and ligaments are not the only structures entering into their formation. In the first place, it might almost be said that in every freely movable joint we have a cavity which, aside from its contents, is not much unlike the abdominal cavity. It is lined with a serous membrane—a shut sac—with the same tendency to the formation of adhesions, the same susceptibility to infection characteristic of this membrane in any location. However infection must be exceedingly rare in simple cases of sprains in healthy subjects.

In considering the constituents of a joint it must be remembered that the muscles moving and fixing it, the nerves carrying impulses to it, the skin overlying it, are as much a part of it as the bones. In reality the latter are passive agents, the former active.

Anything interfering with the free action of the muscles, nerves, and skin will as effectually cripple it functionally and ultimately cause as apparent organic changes as a direct injury to bones, ligaments, and synovial sac—all are but differentiations of the same structures, all are absolutely essential to the integrity of the joint. If the musculature and nervous supply of a joint are impaired or destroyed, nutrition is impaired as a consequence of inaction. This leads to secondary structural changes of themselves sufficient to partially or entirely destroy the joint.

Results of Sprains.—The results of sprains may properly be divided into: 1. Immediate; 2, remote or ultimate. The former have been sufficiently dwelt upon and we will proceed at once to the remote or secondary consequences of sprains. It very frequently happens that a sprained joint progresses in the healing process to a certain degree and there all improvement stops. The swelling has largely diminished, though not altogether gone, but the joint is tender to the touch, particularly in certain definite areas. Movement may or may not be limited. Very frequently it is painful. Usually there is a feeling of instability of the joint in this class of cases. This condition, if permitted to go on, is sure to result in a permanently disabled joint, muscular atrophies, intra- and extra-articular adhesions occur, blood-clots and lymph organize into fibrous tissue, which grows firmer and firmer with age. A joint in this way is said to be in a condition of chronic sprain. In reality it is the secondary consequence of a sprain, which on the least exercise gives rise to acute exacerbations. A more or less chronic hyperæmia results from the continuous irritation—proliferation and fringings of synovial membranes—formations of free so-called melon-seed bodies in the joints (Schuchardt). Injuries of the articulating cartilages may cause their exfoliations and thus also give rise to free bodies (Kakelas).

It must never be forgotten, though frequently repeated, that sprains and other mechanical injuries to joints predispose them to bacillary infection.

The relations of affections of the tendon-sheaths and bursæ to diseases of joints have been recently ably described by Whitman.[1] Frequently these joints present no gross lesions. In this class of cases we are compelled to explain the symptoms as Moullin does—that is, that they are the effects of malnutrition, the result of disuse, or we must conclude that it is the local manifestation of hysteria—an hysterical joint, so-called—if that be possible.

In cases where effusion into the synovial sac has been great a feeling of insecurity is common and may or may not be permanent. This affords a very valuable hint in the early management of these cases.

Ligaments may be torn loose from attachments, and in process of repair cicatricial tissue be deposited in such situations as to impair the joint. Tendons may be displaced and their sheaths so torn that it may be impossible to retain them in their normal situation. Muscles and nerves may be torn and bruised so that they form at least a temporary barrier to recovery. Adhesions may bind down muscles and tendons, interfering with their freedom of action. Tendon-sheaths may be the site of chronic induration which, by direct continuity, may likewise effect a joint.

As has been shown by Krause[2] repeated sprains are more likely to be followed by joint tuberculosis than a single severer injury. Repeated sprains and subsequent infection are in all probability the cause of Dupuytren's contraction of the fingers. Temporary and permanent paralyses may follow sprains where muscles and nerves are torn or bound down by cicatrices.

Treatment.—This may be divided into three different stages, adapted to the stage of the sprain.

1. *Immediate.*—This, of course, means the earliest possible treatment and is of great importance. To be brief, this should be directed to the limitation of hemorrhage, which in this stage is the thing most to be dreaded, for reasons already alluded to. This may be accomplished by (*a*), the proper application of cold or heat; (*b*), bandaging so that pressure falls upon the parts most distended or most liable to be distended by the effusion. Cold should be applied continuously by any of the approved methods. Continuous douching is, in my estimation, the best method as a constant change of water is thus assured. If heat is used it must be applied as hot as can be borne, and should be moist. Both should be stopped when the skin becomes cool and is blanched, and should be followed by firm pressure, with a well-applied bandage. This will dissipate the effusion already present over a large area, and in this way and by virtue of the pressure materially hasten its absorption when reaction sets in.

As Moulin has pointed out, it is very important that this be properly done. All depressions should be well padded up, so that the greatest pressure will fall where it is most needed. Ordinary cotton-wool answers very well for the making of these pads.

[1] Medical Record, vol. xli., p. 375. [2] Wood's Monographs.

2. *Rest; to Follow the Immediate Treatment.*—This may be obtained by the use of plaster (as in Cases I. and II.) or by other mechanical appliances. It is very important that it be absolute so long as it is used. Rest as a therapeutic principle is active throughout every department of medicine; the physician as well as the surgeon realizes its force as a very important factor in the cure of a disease. Like all other active agents, it must be used with discretion. While we give to rest its due place in the therapeusis of sprains it should not be forgotten that there comes a time when it ceases to be of value and becomes in reality harmful. For instance, rest has never yet broken up intra- or extra-articular adhesions or caused to grow strong and vigorous again muscles already wasted by inaction. This should only be made use of until immediate danger of inflammation is past—not until[1] adhesions shall have formed or muscular atrophy shall have supervened. In due time properly executed movements must take its place.

In some of my own cases, as will be seen, rest was applied too long, necessitating the breaking up of adhesions before a useful joint was obtained. It must never be forgotten that the disuse of a part, if too long continued, must inevitably lead to degenerative changes. This is the universal law of disuse.

Duhamel lays great stress on a plaster composed of one part carbonate of lead, two parts olive-oil. It is scarcely possible that there can reside much virtue, *per se*, in the lead and oil.

It should be remarked, in passing, that any dressing applied to a sprained joint should be frequently removed and reapplied, as the contour of the part changes very rapidly on account of the absorption of fluids. If this precaution be not observed it very frequently happens that we have secured neither pressure nor immobility.

3. *Restoration of Function.*—If rest has not been overdone this is very frequently of spontaneous occurrence. In case of adhesions they must be broken up by force, preferably by one heroic application than by many nagging ones. Afterward rest the part until danger of inflammation is past, then follow with massage and passive movement to prevent their reformation. A word of caution in regard to passive motion may be necessary: It should never be violent, should cause little if any pain, but should be of the gentlest character. The involuntary reluctance of the patient should be overcome by gentle and painless manipulations, else we do harm.

Massage is of great value in these cases of so-called chronic sprain. Both Reihmayer and Von Mosengeil[2] have demonstrated this by experiment on rabbits.

The treatment of Case IV. could not well be considered in the above remarks, hence we will take it up in this place for a brief consideration.

After the reduction of the dislocated cartilage there are two ways of proceeding: 1. The application and continuous wearing of a retentive appliance. This should be so made as to exert an equable pressure in the depression on either side of the patella. 2. Operative. This consists in opening the joint and the stitching of the offending cartilage in position, as advocated and successfully performed by Annadale.

July 8, 1892.

Small Incomes of Medical Practitioners in Italy.—From the official return of the Director-General of Direct Taxes in Italy, it appears that the medical profession occupies the lowest position of all the professions in point of income. The notaries come first, advocates next, engineers and architects are a good third, and last of all come, *longo intervallo*, the doctors, with an average of professional earnings of little more than half that of the notaries.

[1] This, of course, can only be put in the form of a positive statement in the individual case. No general rule applicable alike to all cases can well be made.

[2] Therapeutic Gazette, vol. xvi., p. 375.

TWO CASES OF ANOMALOUS PRESENTATION.

By J. D. BUDD, M.D.,

TWO HARBORS, MINN.

Abnormal Face Presentation.—During the night of December 13th I was called to see Mrs. J——, a Swede, multipara, with midwife in attendance. She had been in labor nine hours; the membranes were intact and the os was dilated to the size of a silver dollar. I found the face presenting (right mento-iliac) and progress slow; the pains were severe and about five minutes apart. From this time on there was absolutely no rotation of the chin. The patient was difficult to manage; with each pain she would cross her limbs or straighten them out and remain rigid while the pain lasted. After she had been in labor fifteen hours in all, I sent for my druggist, no doctor being at hand, who administered chloroform. I applied the forceps, the husband holding one leg and the midwife the other. As the face emerged from the vulva in the transverse diameter I called the attention of both assistants to that fact, and let them see the "chin to the right and forehead to left;" when I extracted the child it was asphyxiated and very blue, but was resuscitated in due time. The right eyelid and upper lip were very much swollen. The child, a boy, weighed a little over ten and one-half pounds with nothing on but the pinning blanket. The mother was lacerated but very little.

Most authors agree that unless forward rotation of the chin does occur, labor cannot be complete unless the child be very small, or the pelvis be rachitic. Lusk, in his very admirable work on "Midwifery," says on p. 185: "When the chin has descended along the lateral or posterior wall of the pelvis until the thorax reaches the linea innominata, further progress is only rendered possible when the chin rotates forward and engages beneath the arch of the pubes." Charles Francis Withington, in the "Reference Handbook of the Medical Sciences," vol. iv., page 360, says: "As a rule, it may be said, that when forward rotation of the chin does not occur, the birth of the child by natural means is impossible." Charpentier, in the "Cyclopædia of Obstetrics and Gynecology," vol. i., page 377, says, in speaking of the third period in face presentations, "Anomalies are most frequent in this stage and are here of great importance, for rotation must occur in order that expulsion of the head may follow. If rotation does not take place, we may almost absolutely say that spontaneous labor is impossible, and intervention necessary. Intervention must often be heroic, involving the application of the forceps and of the cephalotribe."

The next point of interest was the fact that after the birth of the head it rotated so that the face looked toward the mother's left, and my most difficult task consisted in getting the shoulders to engage in the antero-posterior diameter. In all my fifteen years obstetric practice I never had so long a time intervene between the birth of the head and expulsion of the rest of the fœtus. The left shoulder eventually engaged beneath the pubes, and the child was born. Now, six days after, the mother and child are doing well.

Testicular Presentation with Paraphimosis.—The following case of paraphimosis is certainly as early in life, if not the earliest, as any on record. In August, 1891, I was called to attend Mrs. C——, American, in second confinement. On examination I could find no part presenting, and the child seemed to be floating in an immense sac of liquor amnii. I ruptured the membranes and fairly flooded the bed. I called for a cup and bailed out the bed, and nearly filled two vessels; after a little external manipulation the breech engaged and labor progressed rapidly. The first part to emerge from the vulva was the testicles and penis of a male child; the penis became erect, and with the increasing pains of the mother pressed strongly against the pubic bones; the foreskin began to retract till it was pulled back as far as possible, and it seemed as if it must tear. The glands swelled and became very red, each expulsive pain of the mother increasing the turgidity. The birth of the child followed quickly, when I

found I had as typical a case of paraphimosis as I ever saw, requiring the usual manipulations to reduce. The nurse remarked to me that she thought the "child was deformed."

BOROGLYCERIDE, WITH ALUM AND CREOSOTE, IN THE TREATMENT OF DIPHTHERIA.

By CHARLES G. AMENDE, M.D.,

NEW YORK.

The commendation of this mode of treatment is warranted by prompt, invariable results, with no harshness in application. It may be stated that most of the material occurred among about two thousand general patients from the tenement-house district between Twenty-sixth and Fifty-fifth Streets west of Eighth Avenue to the river. The district is densely populated, the small tenements crowded, conditions for development of zymotic diseases in some localities most favorable. The diphtheritic cases numbered between sixty and sixty-five. Two of them ended fatally. One of these two was a boy, aged nine, who so firmly closed his teeth that medical treatment was absolutely prevented for four days, and, as reported, up to two and one-half hours before death. In the second case the writer was, after the first inspection at a dispensary, not allowed to see the boy, a three-year old, for nine days; an improvement had occurred, then a relapse, which became fatal. It would seem that the method cannot be held responsible for these two fatalities.

The course of a recent severer case was as follows: A. G——'s father called in haste, December 1, 1892. As I was unable to attend within about ten hours the father was referred to Dr. M——, who diagnosed diphtheria, prescribed, but referred the case back. December 2d, the boy was found with pulse 146, temperature 103.8° F.; the right tonsil was covered completely, the uvula partially; the left tonsil partially, the membrane extending downward behind the posterior pillar. December 3d, pulse 124, temperature 102.2° F. December 4th, pulse 112, temperature 99.6° F. December 5th, pulse 104, temperature 99.1° F.; all parts were free of membrane, but the tonsils were yet somewhat enlarged; appetite good. A three-year-old little sister had threatening symptoms on the 3d, which, however, disappeared on the 5th.

The present routine treatment consists in the application of the above boroglyceride compound to the affected tonsillar and faucial structures, and the administration of quinine internally.

According to the age of the patient, sixty, eighty, or ninety grains of quinine are dissolved with dilute muriatic acid in a three-ounce mixture, and of this is given, according to the severity of the case, a teaspoonful every two or three hours—seldom hourly—for a number of times.

A camel's-hair pencil carries sufficient of the boroglyceride, which is applied hourly.

The boroglyceride compound is a thick, sirupy, colorless liquid. Its formula, finally settled upon, is boroglyceride, one ounce; alum, one ounce; glycerin, q.s. to eight ounces; creosote, twenty drops. Two to four drachms suffice usually.

The formula is so simple that we should expect to obtain it accurately everywhere. But it is a lamentable fact, unfortunately too true, than when prescribing boroglycerides we obtain, with but few exceptions, only boracic acid dissolved in various proportions in glycerin, often with water added to it.

The hydragogue effect of glycerin is well known. It is diminished or obliterated by water. Boroglyceride, in decomposing, abstracts from the tissue much more fluid than glycerin, setting free its nearly forty-five per cent. of boracic acid.

The bacilli, it is now accepted, nest and multiply in the crypts and diverticula of the tonsils; certainly, too, in adjacent favorable localities.

Exudation from the glandular structures cannot fail to float out microbes, which are then exposed to the antiseptics, in a menstruum which tends to adhere as well as to penetrate. A reliable preparation is of prime importance. For its supply the writer carries in his pocket a small vial specially prepared to leave it where needed.

It can hardly be doubted that occasionally the bacilli pass into the general circulation and multiply. In such cases there arises an enormous tolerance to quinine. No case in which sequelæ occurred has so far been reported within a period of a year and a half.

Protection of other little members of the family is effected by occasional applications of the same remedy.

Some cases have come to my observation which suggest that while by no means all enlarged tonsils lead to diphtheria, diphtheria is always preceded by this enlargement. Strumous patients who were feverish and had enlarged tonsils developed no further symptoms when treated upon the above plan; treated with iron perchloride they did repeatedly. Hydrogen peroxide can hardly do well because it decomposes upon contact with the moistened tissues; so does mercurial bichloride.

Although culture experiments were not made, the presence of streptococcus accumulation was suspected several times. But appearance of the streptococcus indicates a favorable soil also for the bacilli. The value of early treatment within the first twenty-four hours cannot be over-estimated. It is far better to extinguish a smouldering fire before it blazes up.

266 West Forty-Second Street.

TWO CASES OF LAPAROTOMY.[1]

By FREDERICK HOLME WIGGIN, M.D.,

PHYSICIAN TO THE CITY HOSPITAL, AND BOARD OF EDUCATION, NEW YORK.

Rupture of the Ileum due to Traumatism.—Late on the evening of May 28, 1891, I was called in consultation to see H. W——, aged fourteen, who gave the following history: On the afternoon of the 23d he received a kick from a calf in the right lumbar region. The pain immediately following this injury was severe, but passed away, and the boy, being reticent, said nothing to his parents of the occurrence. On the evening of the 24th he was suddenly seized with colicky pains, nausea, and vomiting, which continued during the night. The next day the family physician was sent for, but nothing was said to him of the accident, and he, finding localized pain, nausea, vomiting, and constipation, thought it a case of appendicitis, and gave calomel, magnesia sulph. enemata and morphia, in large doses (½ gr.), every two or three hours, but nothing passed the bowels. The pain for a time was confined to a spot on a line midway between the anterior superior spine of the ileum and the umbilicus. After general peritonitis set in, this still remained the point of greatest tenderness.

When I reached the boy I found, on examination, no marks of external violence. The abdomen was very tympanitic. There was no liver dulness, no tumor. There was pain on pressure at the point already mentioned, but general abdominal pain had disappeared. There was no vomiting. Constipation was obstinate. The patient said he felt much better than he had since the 24th. Temperature, 99½° F.; pulse, 130; respiration, 36.

A diagnosis of rupture of intestines with general septic peritonitis was made, and laparotomy was proposed as the patient's only chance; and although the prognosis was unfavorable, as there had already been too much delay and the patient's condition was changing rapidly for the worse, it was thought best not to wait for daylight. So in a farm-house, aided by the poor light of several small lamps, at 2 A.M., assisted by Drs. North and McLaren, of Goshen, and Litchfield, Conn., the operation was performed, with the usual antiseptic precautions. On opening the abdominal cavity by an incision having for its centre the point of greatest tenderness, a large quantity of gas, pus, and some fecal matter escaped. The in-

[1] Read before the Society of the Alumni of Bellevue Hospital, June 1, 1892.

testines were greatly reddened and covered in many places with a fibrinous exudation which was quite thick, but could readily be detached. A rent half an inch long, with contused edges, was found in a loop of ileum, which corresponded to the point of the greatest tenderness. This loop was drawn out of the belly and surrounded by towels and sponges, and then the opening was enlarged and the gas and fecal matter evacuated as far as possible. The wound was closed by interrupted Lembert sutures. The gut was cleaned and returned. At this point the patient, who had borne the operation fairly well, his pulse not having been affected, suddenly stopped breathing, and was revived with some difficulty. The abdominal cavity was irrigated freely with boiled spring water, and this was followed by a weak solution of hydrogen dioxide. Owing to the patient's condition it was necessary to expedite the operation, and the abdominal cavity was not as thoroughly cleansed as would have been desirable. The abdominal wound was partially closed, iodoform gauze being packed in for drainage. The patient was returned to bed, suffering from shock, and ether, with one-thirtieth grain strychnine sulphate, was given hypodermically at intervals of half an hour. The patient rallied and recovered consciousness. His bowels moved freely for the first time since the injury, but he gradually failed, and died eight hours after the completion of the operation. I think it is safe to say that could this lad have had the benefit of surgical aid forty-eight hours sooner, with thorough cleansing of the abdominal cavity, the result would probably have been different.

Pyosalpinx.—On July 27, 1890, I was called to see Mrs. W. E. M——, who gave the following history: Aged twenty-four; married; she has never been pregnant: menstruation began at the age of thirteen years, and was of the regular monthly type. About three years ago, soon after her marriage, she began to have severe pains at her periods, and for two or three days afterward she had a bearing-down pain when walking. On July 17th, she menstruated, the period lasting seven days, and on the day that the discharge stopped (which happened to be a cold, raw day) she rode five miles in an open stage, and took the train for a picnic ground. When the train arrived she jumped from the baggage-car to the ground, a distance of nine or ten feet. On her return home the same evening, and before retiring, she moved and lifted heavy furniture. The next morning, July 26th, she had a severe chill, and felt badly. The following day I was sent for and found the patient complaining of severe pain, temperature 103° F., pulse 120. On attempting to make a vaginal examination, so much local tenderness was found that little could be made out. A few days later another examination was made, and the uterus was found retro-placed, fixed, and tender: there was also a round fluctuating tumor on the left side. This increased in size for a few days, when there was a semi-purulent discharge from the uterus, and the enlargement disappeared, the temperature gradually became normal, and the patient went about as usual. During the following seven months the patient was under the care of another physician, who informed me when I again saw her, in May, 1891, that during the winter she had had several attacks similar to the one just described. During this month, without any special cause, she had two attacks of localized peritonitis, the last involving for the first time the right tube. Since the first attack in July, she had suffered from dyspareunia, pain on defecation, etc. I now advised laparotomy to be performed as soon as she could be gotten into a proper condition. To this she consented. On May 15th, assisted by Drs. Belden and John Buel, of Litchfield, Conn., the operation was performed, with the usual antiseptic precautions. The uterus was very adherent, as were the appendages, and the adhesions were with some difficulty broken up; hemorrhage was slight; both ovaries and tubes were removed. The tubes were enlarged and contained pus, and the left ovary was cystic; the abdominal cavity was not washed out. The wound was closed entirely without drainage, and the patient made a rapid recovery, the temperature becoming normal on the second day. At this time, as the patient was still inclined to vomit, a seidlitz powder was given, and as soon as the bowels moved, which they did in two hours, the nausea and vomiting disappeared. The wound healed by first intention, and the patient got up on September 1st, and gained rapidly in health and strength.

These cases illustrate the difference between gynecological laparotomies and those that the general surgeon is so often called on to do, and explains why the gynecologist is so much more successful in this class of work. The one done as a last resort, in the dead of night, with the patient septic and exhausted with his five days' fight for life, with poor light, and little time for preparation, and almost no hope of success; the other done after a careful preparation of the patient, when the disease was in abeyance, the surgeon thus having time to make proper preparations. *Per se*, the first operation was less severe than the second, and could it have been done at an early date before the patient had become exhausted and septic, it ought not to have been followed by graver symptoms than the other, and the result should have been as satisfactory; and yet most of the cases of this kind that are reported have died in spite of operation, not as a result of operation. When physicians understand the meaning of the symptoms of these cases more clearly, they will stop wasting valuable time with opium, cathartics, etc., at least after a reasonable trial, and will call to their aid their brother, the surgeon, while the patient is still in good condition. Then shall we, let us hope, be able to fill the journals with reports in abdominal work as satisfactory as those of the gynecologists.

255 West Thirty-sixth Street.

HYDROGEN DIOXIDE IN THE TREATMENT OF CARBUNCLES.

By WILLIAM W. GOLDEN, M.D.,

ELKINS, W. VA.

The pyolytic action of this agent by virtue of its destructive oxidizing power is well known. The extent of its utilization, however, is as yet unlimited by any well-defined therapeutical boundaries. Reports of its use, therefore, are very desirable even if they lack originality. I am not aware of any case of carbuncle reported where this agent has been put to the test, but that matters very little.

Mr. J. W. P——, aged fifty-five, was the first patient I tried it on. After a protracted attack of diarrhœa he developed several carbuncles on his hand and forearm, followed by one of immense size on his left cheek. The former, one of which had reached the size of an adult's fist when the patient came under my observation, have healed up rapidly after the free use of the knife and the sharp spoon. This radical procedure I thought unadvisable for the one on the face, which had extended from the ear behind to the side of the nose in front, limited above by the zygoma and below by the lower border of the lower jaw. The use of caustics and active disinfectants were brought into play, and among them peroxide of hydrogen did signal service. I made parenchymatous injections (with an ordinary hypodermic syringe) of the peroxide in quantities varying from ℥xxv. to ʒss. twice a day, with the following results: After the lapse of six to eight hours new openings formed, discharging considerable quantities of liquefied core, with the consequent diminution of tension for a considerable distance around the point of injection. The spontaneous formation of new drain-channels was, in all probability, due to the evolution of gas within the core as a result of the oxidation, and this was forced to escape through the points of least resistance. It has thus proven to me far superior to carbolic acid in this affection, as the liquefaction produced by the acid exhibits little tendency to spontaneous evacuation. The condition of my patient, however, soon became such as to de-

mand a speedy removal of the slough, and the potential and actual cautery soon brought about the desired result: the use of the cautery was followed by a kindly healing wound. But the short trial with the peroxide has convinced me that in it we possess a very useful agent in the treatment of this troublesome affection.

FRACTURE OF BOTH ARMS, COMPLICATED BY LUXATION OF THE ELBOW OF ONE.

By B. SHERWOOD DUNN, M.D.,

PARIS, FRANCE.

A GENTLEMAN, fifty-seven years of age, in attempting to cross a lawn in front of his hotel, at Nice, just at the hour of twilight, stumbled over a twelve-inch-high iron guard, and fell forward upon both hands, causing the fractures and dislocation as above stated.

The case is somewhat remarkable in that almost perfect reunion of the fragments resulted at the expiration of twenty-five days from the date of the accident.

There was a fracture of the anatomical neck of the radius of the right arm at the wrist. Left arm: Dislocation of the ulna at the elbow, projecting to the rear and outward, and fracture of this bone obliquely through the surgical neck.

The fracture of the inferior extremity of the radius presented nothing unusual, and was reduced last.

The dislocation and the fracture of the superior extremity of the ulna were reduced within fifty minutes from the time of the accident. The superior fragment was brought into apposition with the inferior, the olecranon process being felt in its natural relation to the condyles, and sustained by an elbow-shaped zinc "Scultet" splint, wadded, and firmly bandaged from the fingers to the shoulder.

This apparatus was removed the third day and replaced by one in plaster, the zinc splint being retained in the same position, holding the arm at an easy right angle. The arm was found to be greatly swollen, which increased upon the removal of the bandages.

There was considerable œdema of the entire member; no effusion of liquid at the elbow-joint, but considerable extravasation of blood into the tissues inferior to the joint. Eight days after this the marked decrease of the swelling necessitated the removal of the dressing. The œdema still persisted to a degree, and made the outlining of the important points very difficult; but we were persuaded that the superior fragment had been maintained in its proper relation to the shaft and to the joint. We made slight passive movements of the articulation without great difficulty or pain to the patient, and established the fact that reunion was well advanced between the fragments.

To facilitate the circulation and the reabsorption of the extravasated blood and œdema, and in view of the remarkably good progress and condition of the fracture and joint, the arm was redressed, in demi-extension, in a silicate of potassium bandage, with a small modelled zinc splint, the shape of the angle of extension, to support and protect the point of fracture and maintain the olecranon in proper position.

The patient was anxious to return to London, and the day before his proposed departure from Nice (twenty-five days after the accident) we removed the bandages for a final examination, and to be able to give precise details as to the condition and necessary after-treatment. We found considerable atrophy and hardened œdema of the muscular tissue, posterior, superior, and inferior to the elbow-joint. Passive movement of the joint was not difficult, and caused no pain to the patient. The consolidation of the fractured bones was shown by a pronounced increase in the osseous tissue at the point of contact.

The gentleman went under the care of Dr. T. Smith, of St. Bartholomew's, on arriving in London, who confirmed the facts as above stated; and by a letter received from the patient later, I was informed that he retained the normal use of the left arm with the exception of rotary motion, which was incomplete. At the date of the patient leaving Nice, complete reunion had taken place in the fourchette fracture of the radius, and it was redressed in a simple dry bandage with splints. Dr. le Comte de Lacaze was with me when called to this case, and I think the good results were largely due to the promptness with which we were enabled to perform the reductions before the subsequent swelling, as well as to the superb health and condition of the patient.

15 RUE DES PYRAMIDES.

MATERNAL IMPRESSIONS AGAIN.

By R. F. LICORISH, M.D.,

BARBADOES, W. I.

SOMETIME ago one of the correspondents of the MEDICAL RECORD, sceptical anent this subject, called for confirmation on the following lines: 1, Where abortion follows closely on the receipt of the impression, the fœtus bearing the result; and 2, the occurrence of the results of such impressions on animals. I can now give information confirmatory of both. If the first be open to objection as not coming within my own experience, yet the second, and I take it more important, must be accepted. It offers, too, the means by which the question can be definitely settled.

1. The following is related by an aged practitioner of the island, a man of the greatest integrity and veracity. While attending a planter of the island, he had occasion to order for his patient a certain gruel. In preparing this the wife of his patient, then in her last week of pregnancy, spilled it very hot on her wrist, causing a severe burn, one of such severity as to require weeks of treatment. On receiving the burn she relates that she felt much disturbance in her womb, followed in a few hours by a complete cessation of all movement. The following day a dead fœtus was born, bearing on its corresponding wrist an impression the exact size and shape, in proportion, of the burn on the mother's wrist. This is vouched for by both physician and mother.

2. Some years ago, hearing that cats and dogs may be made to bring their young with stump-tails, if the tail of the mother be struck with the side of the hand while asleep, when in young, I tried the experiment on our cat, with the result that of four kittens born, two had stump tails, one a broken, and the fourth a natural tail. This case I think important, as by experiments carried out in a similar way, the question, as I have said, may be definitely settled. It was through my mother telling me that my father (dead) had caused the birth of pups without tails in a similar way that I was induced to try the experiment. I have since then heard of similar results from others. I must confess I see no difficulty in accepting as truth the question of maternal impressions, looked at from my view of vital philosophy. Vital action is a mode of motion. Nervous influence can disturb that motion. In adult life, on account of the various nerve-centres reacting on one another, the disturbance is soon righted. In the fœtus, with its loose connection with the mother, and its undeveloped nervous system, when once the disturbance travels to it the impression remains permanent.

In Praise of the New York Quarantine.—Dr. Jenkins, Health Officer of the Port, recently received an engrossed copy of the resolutions adopted by the North Atlantic Steam Traffic Conference, the Continental Conference, and the Mediterranean Conference at their meeting held on October 17th. The resolutions commend Dr. Jenkins and his staff for their energy, devotion to duty, and fairness to all interests during the period when it was thought cholera might gain a foothold in this port. They say that the work was conducted with a view to the least possible interference with business interests and travel, and so as not to inconsistently obstruct or injure commerce.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CLINICAL SOCIETY — MYXŒDEMA TREATED BY THYROID GLANDS AND PREPARATIONS OF THE GLAND—REMOVAL OF PECTORAL MUSCLES FOR MAMMARY CANCER.

LONDON, February 12, 1893.

SELDOM has there been a more interesting meeting than the last at the Clinical Society, on January 27th. There were other subjects of interest, but the attraction of the meeting was the exhibition of a series of patients who had suffered from myxœdema, and had recovered under the new treatment by thyroid glands. Two years ago myxœdema was regarded as incurable and its treatment was a hopeless subject, but the last eighteen months have witnessed a triumph in medicine. Whether the recoveries will be permanent, or whether the patients will have to continue the use of their remedy from time to time, is a speculation of less import than in many cases, since an occasional meal of thyroid would be but a slight burden, if any. In fact, I have at times dined on cooked thyroid when it has been served instead of sweetbread, and although it is inferior to pancreas, it is certainly edible. This reminds me that some have found it rather difficult to make a butcher understand what was wanted—the thymus was sometimes sent. Let them ask for "neck sweetbread." But for the cases: Dr. Arthur Davies showed three. The first was a woman, forty-seven years of age, who had been shown at the Society as long ago as 1886, when no one had any hope of finding a remedy. Dr. Davies had given thyroid extract reduced to the form of a powder, in doses equal to one-eighth part of a gland. This was given twice a week, and subsequently every day, in lukewarm beef-tea. Her weight had actually fallen four stone, and she had become more active, talked and breathed more freely, and the skin had become much more supple. Two other women were also shown who had benefited in the same way, one of them having lost sixteen pounds weight in a month. Then there was a man, forty-five years of age, whose disease had gone on for six years, but who had rapidly improved under the treatment, losing fourteen pounds' weight in a couple of months.

Dr. Pastem brought a woman, fifty-five years of age, who was admitted to the Middlesex Hospital last October with typical myxœdema, and a history of invalidism going back seventeen years. The treatment in this case was the raw gland. At first half a small gland was given twice a week, and later a whole gland daily. She had greatly improved, having lost about a stone in weight. Her skin looked as if she had had scarlet fever, and now is smooth and supple instead of rough and harsh. Although the improvement was rapid, the dose was too large for her, as after she had consumed five glands untoward symptoms compelled a diminution.

Dr. Calvert showed a woman who had had the disease for twelve years, and is rapidly getting better under half a gland, three times a week, very lightly fried to render it more palatable.

Dr. Murray, of Newcastle, was present at the meeting and told us his experience since he introduced the treatment. He first used a glycerine extract of thyroid juice with an equal part of a five per cent. solution of carbolic acid. This he injected subcutaneously. One sheep's thyroid was represented by a drachm and a half of this solution. He injected at first twenty-five minims, but it caused irritation, so he reduced it to fifteen. He is careful to inject very slowly, lest it should enter a vein. By the mouth he gives equal parts of the juice, glycerine, and water. It takes four times as much by the mouth as by hypodermic injection to obtain a similar effect. He divides the treatment into two stages. In the first, the symptoms are removed; in the second, a much smaller amount is given to maintain the improved state of health. He showed a series of charts demonstrating the influence of the remedy on the temperature. He found an injection of twenty minims once a fortnight enough to keep the patients well, and he related a case of a patient who passed through the first stage in six weeks, and has kept quite well on a daily dose of ten minims by the mouth. The patients, he thought, should be taught to regard the medicine as a food necessary for them to prevent recurrence.

Dr. Ord congratulated Dr. Murray, and though he had tried implantation of the thyroid with temporary success, found the best plan was to give the remedy by the mouth. He used the extract. It was necessary to remember how easy it is to give an overdose.

The Clinical Society seemed to be the natural home of this subject, for before it were brought the first cases by Gull, followed by the great paper by Dr. Ord, and the important report of the committee appointed by the Society.

The treatment has been a most successful progress. First came Victor Housley's suggestion of transplantation of sheep's thyroid into the patient's tissue. This was tried with some success. Then Dr. Murray tried the extract subcutaneously. The success of this plan naturally led to a trial of the effect when taken by the mouth, and so Dr. Hector Mackenzie simply fed a patient with thyroids, and Dr. Davies has shown how we may reduce them to pharmaceutical products. It seems to matter little or nothing how it is given, so long as thyroid juice can get into the system.

The success of this treatment is sure to create a "boom" in animal extracts for various diseases. In fact, since Brown-Séquard's announcement, plenty of attention has been given to the subject, and the triumph in the case of myxœdema is one result. Already kidney emulsion for renal disease has been attempted, and brain emulsion for mental disorders, but the cases are by no means on all fours with myxœdema.

As I have said, there were other subjects of interest at this meeting, but myxœdema was the absorbing topic, and so it is wherever medical men meet in friendly chat. I have had but few cases of my own, and they were all before the new treatment.

Mr. A. Lane brought forward a case of cancer of the breast, in which he removed the whole of the pectoral muscles and dissected from the nerves and vessels of the axilla the whole of the areolar tissue. He advocated this thorough eradication of the disease, which has, I believe, been previously tried in America. Mr. Cheyne and Mr. Eve were doubtful of this plan. Mr. Eve, indeed, said he had once done it when the pectorals were invaded, but did not mean to do it again.

Suprapubic cystotomy was the next subject brought forward by Mr. Parker, and several surgeons spoke on it.

THE USELESS WORK OF THE ACADEMY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In reading your criticism on the work of the New York Academy of Medicine in connection with quarantine legislation, I share with you the humiliation and mortification attending the unfortunate miscarriage of its good intentions.

Every medical man in this city will recollect the initiative taken by this honorable body last summer; the promises made for radical reform, the necessity for prompt action, and the general flourish of trumpets before the public, the repeated appearance of the Committee on all sensational occasions, the special meetings to give it a hearing and endorsement, and the frequent and well-advertised intentions of its individual members to save the country from pestilence and ruin, and all this for nothing. The reports were voluminous, vituperative, and well calculated to alarm the public; the Health Officer was persistently abused, and everything promised well on paper until the time came for action. Then nothing was

heard from the Committee, although three different quarantine bills were introduced into Congress. The discussions on the merits of these bills were made public, still everything was quiet at the Academy.

Finally, at the last hour, the report, which should have been presented months before, was called for, and then the Committee was enlarged by the addition of a few more representative (?) men. This Committee was directed to draft a new bill and tell the Senate and House of Representatives that it must be adopted because it was to be the Academy bill. The members were to go to Washington in a body, and thus represent the Academy in force. But they did not go. In fact they were informed, after sending a written protest, that the Senate did not care to consider their objections, as the bill against which they should have protested had passed both houses. Of course we have had another long report on the reasons, such as they are, why the Committee did not do its work. Its was the old story, in another form, why the turtle got ahead in its race with the over-confident hare. There was simply an unfortuitous state of affairs at a critical moment; but, after all, everyone is inclined to blame the hare for not being more consistent in his habits. The fact is, the Academy has been snubbed through its representative Committee, which has been shamefully derelict in its duty.

In attention to these matters there must be a better incentive than posing as reformers, a better motive than the parade of the names of the Committee in the newspapers.

Even in the last report the Committee had the shameless audacity of asking to continue itself in another direction of missionary work—cleansing the stable when the calf is gone: but the Academy very properly discharged it. Why not follow up the business by discharging the original Advisory Committee? What has it done thus far to deserve its place? No one can question what it has *not* done.

There has been altogether too much band music and dress parade about this whole business, and as a result the Academy stands in an attitude of humiliation to the profession and mortification to the public.

What is the situation of the quarantine regulation now? The new law gives us practically nothing but a name for National Quarantine, and it makes no difference now whether the Academy endorses it or not. The Academy is nowhere now, but its Advisory Committee is likely to keep on advising until doomsday.

It may be charged that your correspondent is rash in his aspersions and intemperate in his assertions. But I submit that these are made with some reason when we consider what was promised and what was actually done. This Committee figured in everything representing the Academy. It was utilized for the Chamber of Commerce for a Quarantine Committee, and finally for drafting a new bill and making a new law. It had every opportunity to distinguish itself and reflect credit upon the Academy; that it did exactly the opposite everyone now knows. H.

New York, February 20, 1893.

To the Editor of the Medical Record.

Sir: I think you are in error in your editorial upon the "Useless Work of the Academy," in thinking that the National Quarantine Bill, which has since passed, had been entirely agreed upon before the action of the Academy of Medicine, in favor of National Quarantine. It may be that this is technically true, but I am credibly informed that the special meeting of the Academy, on January 31st, in favor of National Quarantine, followed as it was by the appointment of the Committee of Twenty-one, and by telegrams to Washington, had very considerable influence in inducing the representatives from the State of New York to desist from their opposition to the Harris Bill, which has since passed. Indeed, one of those representatives publicly said that he did not wish to contend with the sentiment of the medical profession, and, therefore, withdrew his support of the amendment, which virtually destroyed the bill in question. I agree with the Record, that it would have been very well for the Committee on Quarantine to have reported earlier, but so far as the present administration of the Academy is concerned, it was reported as early as possible after its inauguration. I am very happy to think that the Record, with its great influence, is on the side of the activity of the Academy, in the fields of social, sanitary, and political science. Since the question as to how the Academy should act on such subjects has been put before its Fellows, they have always, on any fair presentation of such matters, been on the side which you so emphatically represent. It is to be hoped, as the Record advises, that in the future the Academy will be "on the alert, and take a more aggressive position." I believe, from the sentiment expressed, that it will hereafter probably "take the lead, rather than follow in the wake of public opinion."

Yours respectfully,
A Fellow of the Academy.

February 18, 1893.

THE NEW YORK STATE MEDICAL LAW.

To the Editor of the Medical Record.

Sir: In your issue of January 28, 1893, under the head of "Medical Items," an exhaustive extract is made from an article, originally published in the *Medical Review*, which is likely, in either its fifth or sixth subdivision of statutatory enactments, to be misconstrued as to its bearing on the medical laws of the State of New York. The very points which the writer of that article makes against his interpretation of the various State laws now in force, are clearly answered, according to his conclusions, by a close study of our State law. We make no discrimination as to previous residence, or place of graduation, of the candidates who apply for license, but insist upon the following conditions, which seem to the writer to be in perfect harmony with that spirit of fairness and equity which should qualify all legislation for the people:

Requirements.—1. Satisfactory evidence of preliminary academic education as follows: Either (*a*) academic degree from some recognized degree-granting college; (*b*) certificate of a full year's course of study in any registered college or university; (*c*) certificate of satisfactory completion of three years' course in some recognized high school or academy; (*d*) certificate of having passed preliminary Canadian medical matriculation examination; (*e*) certificate of having passed matriculation examination of any university in Great Britain or Ireland; (*f*) Regents' diploma; (*g*) Regents' pass-cards for any twenty counts not including, reading or writing. 2. Diploma of M.D., or license from some foreign country conferring full right to practise medicine in all its branches in the country in which it was issued. 3. A certificate of moral character from at least two physicians practising in the State. 4. Applicant must be more than twenty-one years of age. 5. Must have attended at least three full courses of lectures (six months' minimum course and no two in one year).

Such are the qualifications exacted from all who desire to be licensed to practise medicine in New York State, previous to being allowed to enter the examinations; and all future practitioners, whether graduates in medicine from one of our own State institutions or from South Africa, are put to the same test.

Licentiates from other State examining boards in the United States, whose licenses were obtained after having passed tests such as the above, may have their licenses endorsed and be granted the right to practise without examination.

Such is our New York State law—it does not discriminate against sister States, according non-residents the same privileges vouchsafed to our own citizens. Examinations are required of graduates of all foreign medical colleges, for two reasons: Many foreign bogus diplomas

are in existence, and too much time would be occupied in verifying the genuineness of each one; foreign physicians should be sufficiently proficient in our language to insure against any mistakes likely otherwise to occur in the practice of medicine from ignorance of English, and the written examination successfully passed, precludes, to a large extent, the possibility of such accidents.

Wherein could our law be improved?

A national law would be desirable, but cannot be passed within the lifetime of any present student of medicine. In the meantime we must regulate our medical affairs with the best interests of the community foremost in our minds.

In conclusion I would state of New York, as the writer in the MEDICAL RECORD has said of Germany: In the United States any medical college has the power to grant a diploma; but in New York State such diploma nowise entitles its holder to practise medicine. He can only acquire this right by passing a State examination in New York, or by presenting for endorsement a license from a sister State, which license was secured after successfully passing an examination equal, as to standards, to the New York State examination.

Respectfully,

M. J. LEWI, M.D.

100 EAST FIFTY-EIGHTH STREET, NEW YORK CITY.

A SUGGESTION TO THE AMERICAN SURGICAL ASSOCIATION IN REGARD TO THE PAN-AMERICAN MEDICAL CONGRESS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the *Deutsche Medizinische Wochenschrift*, No. 2, of January 12, 1893, Professor Czerny, as honorary member of the American Surgical Association, publishes an open letter to C. H. Martin, M.D., LL.D., from whom he received an invitation to attend the Congress meeting at Washington, D. C., September 5 to September 8, 1893.

Aside from the time in which the above congress meets, it almost conflicting with the meeting of the International Medical Congress to be held at Rome, it appears to many as an opposition congress. Professor Czerny does not regard it as such, although many other members of the medical profession do; but he censures the committee for not adding to its programme the German language as one of the official languages of the Congress. His reason for so doing, I and other American physicians approve, as we owe much of our further advancement in the medical sciences to the medical universities and teachers of Germany. German medical science, which occupies the foremost position in the world, should at least be represented in the Pan-American Congress by the recognition of the German language as one of the languages of the Congress, especially when many of the most eminent members of the profession in America owe much of their success to the teachings they received in Europe.

Many of our colleagues are at present enjoying the advantages of the German clinics, hospitals, and scientific laboratories, and not a few hold positions as assistants with some of the most prominent men in their line in the world. Of these I need only speak of Czerny, in Heidelberg, v. Esmarch, in Kiel, Sonnenburg, in Berlin, v. Winckel, in Munich, under whom many other Americans besides myself have had the honor of serving as assistants, and who, with greatest willingness, not only have put at our disposal their vast amount of material, but also were ready to aid us by every means and manner in our work, for which we are highly indebted to them.

As regards those who have not had the opportunity to pursue their studies in Germany, they also owe a great deal of their advancement not only to German medical literature but also to a great many eminent teachers who enriched their medical education in Germany.

Finally, as Professor Czerny, in his article, says that the Portuguese and Spanish languages are not spoken by most physicians of the United States, and as many of them have pursued their studies in Germany, it will be seen that, in order to communicate with each other, German will most likely be the language used, inasmuch as also a great number of physicians, both of Central and South America, are continually found to pursue their studies in German universities. Casting aside all the above, medical science should not be one-sided in its views. In general we may be Pan-American in all our thoughts, but in science we must be cosmopolitan, especially we medical men, and our standard should only be: "Salus ægroti suprema lex." I hope that my suggestion will bring about a change in the programme of the Pan-American Medical Congress which will not prevent any of our German colleagues from taking active part.

OSCAR J. MAYER,
Assistant, Surgical Staff,
Krankenhaus Moabit., Berlin.

January 13, 1893.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 18, 1893.

	Cases	Deaths.
Typhus fever	31	10
Typhoid fever	9	4
Scarlet fever	187	16
Cerebro-spinal meningitis	0	3
Measles	82	9
Diphtheria	113	31
Small-pox	11	2
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

Copper-Poisoning Simulating Cholera.—Mr. J. Bunting reports, in the *British Medical Journal*, that he was called early one morning to a patient suffering from severe diarrhœa, vomiting, and cramp in both legs. There was abdominal tenderness, thirst, rapid weak pulse, then dirty watery motions, anxious expression of face, but not the bluish pinched face of cholera; the skin was cold and damp. There were two others in the house suffering from pain and vomiting only. On seeking for a cause he found all three had partaken of damson jam the evening before, and on testing the jam he found copper in rather large quantity. Its presence was owing to defect in the tin plating of a copper preserving-pan.

The Water-supply for Berlin is taken from wells twenty metres deep, situated near a lake in the Grimewald (the forest that stretches from just beyond Berlin to Potsdam), and is first brought into reservoirs, from which it is pumped to sieves, and then passes through a bed of coke three metres thick, thereby losing the iron and sulphuretted hydrogen. From the bed of coke the water then passes on to the sand-filters, out of which it passes pure and clear.

A British Cholera Conference.—Delegates have been invited from the sanitary committees of all the ports of the United Kingdom to a conference in London to discuss the cholera question, and to promote unity of action in regard to measures for preventing the introduction or spread of the plague in the spring.

Testicle Juice in Cancer.—Brown-Séquard says that injections of testicle juice have been used with great success in a case of cancer of the uterus. The patient, who was so weak that she could not walk about the room, was soon able to be up and walk out-of-doors. The discharge which had been very profuse and offensive, ceased altogether after a few injections.

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Original Articles.

RECENT PSYCHOPHYSICAL INVESTIGATION.[1]

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WHEN you, Sir, honored me with an invitation to read a paper upon Experimental Psychology before this Society, I was for some time greatly perplexed as to the choice of a subject. For I knew that I should have two classes of hearers in my audience: firstly, there would be those who, while engaged with the theory and practice of two sciences, Physiology and Pathology, which stand very near my own science, yet had no direct acquaintance with psychophysical methods or results; and, secondly, there would be others who, whether from choice or opportunity, had busied themselves with borderland cases, and gained familiarity with borderland literature. Such cases would be those of aphasia and amnesia, in their manifold forms; or of the loss of the muscular consciousness, as Duchenne called it, of which, in partial shape at least, I take it many of you have had experience. I had, then, to select a topic which should try to satisfy all, which should be intelligible without being elementary; and I thought I could not do better than offer you a brief review of the most recent contributions to our knowledge throughout the whole domain of psychophysics—so far as this was possible within the limits of a short essay. For those who know, it is well at times to halt and take breath, and look around on the work achieved by their fellow-laborers. For those who do not know, it cannot be amiss to get some general notion of the progress made, and of the progress which is still to be made, in a sister-science. Let me frankly admit, too, that I was to some extent selfish in my choice. The writing of this paper has been of more use to me than I can venture to hope the hearing of it will be to you.

You know that for modern psychology—practically, yes, for modern psychology as a whole—the elementary processes of our conscious life are three in number. They are the processes of sensation—blue, sweet, hot; of feeling—pleasantness and unpleasantness, of all degrees; and of conation or will. In the concrete mentality of everyone of us, these three processes are fused and tangled, associated and combined, well-nigh out of all recognition. But analysis, introspective and experimental, has led us to them, as the conscious ultimates: irreducible, underivable the one from the other. It is against them—is it not always at the outset against the simplest facts?—that experimental method has to lay its lance in rest, if it is to win anything of the treasure of the enchanted castle of Mind.

With the history of this conflict I shall not detain you. Here am I myself, a living witness to the fact that there is an experimental psychology. I shall rather plunge at once into the thick of the battle; and, if I may vary my metaphor a little, still keeping it a warlike one—for, indeed, we are doing nothing so much as besieging mind, wearing it out, till it gives up its facts—I shall attempt to picture to you the state of the attacking line, its present success or temporary discomfiture, on the three sides which I have already named.

The most steady advance is that of the sensation-column. This is natural; for sensation is the most objective of mental processes. The exciting cause of the sensation—the stimulus, if one is to use a technical word—is (usually, at least), a process in the external world. And this physical process, this stimulus, is susceptible of physical measurement. If, then, we can, in the formula of some given conscious content, write stimulus for sensation; if we can establish a relationship between stimuli, as co-ordinate with, equal to, a relationship between the sensations which these stimuli respectively occasion—then we can measure sensation. So the column advances with good hope, gaining ground steadily; but its front is not an unbroken line.

There is great activity just now on the extreme right, and on the extreme left; in the departments of the highest and of the lowest sense, as they are termed; in the fields of visual sensibility and of cutaneous sensibility. Eye and skin—so near together in their origin—have become so widely different in the course of evolution that they now occupy the most divergent positions on the sensation scale. A glance at recent literature shows one this twofold activity. In the volume dedicated to Helmholtz by his pupils, on the occasion of his seventieth birthday, seven out of eight articles deal with physiological or psychological optics.[1] In the current number of Wundt's "Philosophische Studien,"[2] the two experimental papers treat of color-blindness and of the binocular after-image, respectively. At the second International Congress of Experimental Psychology, held in London last August, two new theories of color-vision were propounded, one of which has since been published in Professor Ebbinghaus's *Zeitschrift*;[3] and there were many other contributions dealing with the psychophysic of the eye. The last completed volume of the journal just mentioned contains thirteen optical articles out of a total of eighteen, and so forth. Then again, in the new part of Dubois-Reymond's *Archiv*, we have the first portion (some sixty pages) of an extended investigation of the cutaneous sense;[4] while in the most recent number of Ebbinghaus's *Zeitschrift*, a Prague professor devotes fifty pages to the pathology of that and of the deeper-lying sensibility.[5] I will not multiply references. Optics and Haptics—the sciences of the eye and of the skin—both are in a ferment of activity.

What is it, then, that is doing, in these two directions? Let us begin with the easier question—that concerning the progress of haptics. You have all heard of the spots and areas claimed for the external skin by Blix and Goldscheider—pressure-spots, cold-spots, and heat-spots and areas. Since the original investigators published their memoirs, no one has systematically tested their results, and confirmed or questioned them. Bruecke—whose recent death has left such a gap in the ranks of physiology—obtained partial confirmation of Goldscheider's assertions from experiments carried out in his laboratory, but did not consider his results certain enough for publication. The fact seems to be that different individuals react very differently to cutaneous stimulation. If I pass a pointed metal cylinder—an adequate thermal stimulus—over my own skin, I certainly receive from time to time definite

[1] Read before the Tompkins County Medical Society, Ithaca, N. Y., November 30, 1892.

[1] Beiträge zur Psychologie u. Physiologie d. Sinnesorgane, 1891.
[2] Bd. viii., Heft 3.
[3] Zeitschrift f. Psychologie u. Physiologie d. Sinnesorgane, iv., 3, pp. 211 ff.
[4] Ueber der Hautsinn, von M. Dessoir. Archiv f. [Anatomie u.] Physiologie, 1892.
[5] Ueber die sog. Conscience musculaire, von A. Pick. Bd. iv., pp. 161 ff.

and localized sensations of heat, cold, and pressure. If I pass a pointed cork cylinder over the skin—an inadequate thermal, but adequate mechanical, stimulus—I get the cold and pressure points, and (very occasionally) the heat areas. But although these spots are so definite for sensation at the one time, they do not necessarily remain so. If I pass my cylinder over the cold-spot, we will say ten times in succession, I obtain the sensation of cold, perhaps, only twice. And some persons seem unable to localize a cold-spot for more than a single stimulation; while others, again, do not recognize the specific cold-sensation at all. Obviously, systematic experimentation is needed. Are the spots end-organs? If so, are there two temperature-senses—a heat-sense and a cold-sense; or is there only one temperature-sense, embracing the two opposite qualities of hot and cold and the transition-qualities that lie between them? Again, is there one quality only of the mechanical cutaneous sensibility, the quality of pressure? Or are there other qualities? Lastly, if the spots are not end-organs, what are they? Do they merely represent free nervous terminations of different character? What do we just mean, then, by a free nervous termination? This is the sort of question which is being asked, and which Dr. Dessoir is attempting to answer.

I pass over the problems presented by the muscular, tendinous, and articular sensibilities, and proceed at once to the sphere of Optics. What is being done there? Well, that is very hard to say, so briefly as I shall have to say it here. In the first place, Helmholtz is busy upon the second edition of his "Physiologische Optik." And Helmholtz is the representative of one of the two component theories of color-vision which are now in the field. He assumes three basal sensations—red, green, and violet—from the mixture of which, in the right proportions, all color-sensations, as well as those of the black-white series, are derived. The rival hypothesis, that of Hering, posits three visual substances—a red-green substance, a blue-yellow, and a black-white. This is, then, as regards color-sensation, a four-component theory. Over against these views stands that of the psychologists, who hold that a component-hypothesis is never anything more than a mathematical schema, within which facts can be arranged; that it can never claim to be an explanation of the facts. These investigators maintain that there is but one visual substance, which can be stimulated in two ways, chromatically and achromatically; and that, in the former case, the quality of sensation is a function of the wave-length of the homogeneous light which affects the retina in the particular case. The Helmholtz theory—to speak more correctly, the Young-Helmholtz theory, for it was Thomas Young who was its originator—had, earlier, all the advantage of concreteness and simplicity. The hypothesis of Hering is more complex, and makes use of physiological concepts the validity of which is certainly doubtful. Wundt's periodicity-theory covers the facts best, but is the worst theory; it is too abstract, too little definite. All of which means that we have become more modest, as regards our optical knowledge, than we used to be; for this logical order, of concrete to abstract, is also the chronological order of the proposition of the hypotheses.

Helmholtz and his school, then, are engaged in refurbishing the three-component theory to meet modern requirements. And the sceptical onlooker is reminded of the Ptolemaic system of astronomy, with its explanations of the deviation of the planets from their circular course by superposition of epicycles. At last there were so many epicycles, that the original circles could hardly be any more distinguished. Hering and his school, Wundt and his followers, are criticising the reconstruction, step by step as it proceeds, and saying sharp things of each other by the way. And in the meantime, as I told you at the outset, new theories are starting up; such as that of Ebbinghaus, who sets out from the anatomical fact of the visual purple, whose complementary is yellow, and from the anatomical hypothesis of a visual red, whose complementary is green.

If one were required to put his finger on the central problem now on the carpet, he would, I think, mention the problem of saturation and illumination of colors. When a spectrum is cast upon a dark surface by the ordinary dispersion methods, not all parts of it are equally bright. Most persons place the brightness maximum in the yellow; but every color has a specific brightness. What does this imply? Has every color a double illumination-value—the specific color-value and the specific brightness-value which attaches to the color? If this is so, how are we to formulate these values mathematically in expressions of function?

Or take the other side of the saturation question. What is the relation of saturation to illumination? If you mix in white light with a homogeneous light, you get a color-quality, of course, which is less saturated than the homogeneous light was. But if you illuminate, by means of white light, a saturated colored surface, you get an effect which is equivalent, for sensation, to a diminution of saturation. Are the illumination-qualities identical with the saturation-qualities? Or are we dealing here with two different sensational series? We must possess our souls in patience. The answer to these questions is not to be given yet.

But such problems only constitute one portion of psychological optics. Helmholtz tells us, on the first page of his great book, that the eye distinguishes not only light and darkness, but also form. And if there is room for theorizing as regards the former function, much more does hypothesis reign supreme as regards the latter. One school, the school of Helmholtz, gives a psychological, or (to speak more correctly) a logical interpretation of our apprehension of visual space; we judge of forms by inference from our past experiences, and our judgment in a concrete case is right or wrong, valid or deceptive. Another school, that of Wundt, combines a psychological with a physiological explanation. True, we sense a stimulus not absolutely, but relatively; that is, our sensation-content is always colored, so to say, by association; but, in this particular instance of the visual space-idea, we are assisted by special muscular sensations—by the sensations accompanying the movements of the eyeball. Experimental researches are now being carried out which, although they cannot (in all probability) settle the question, will at least throw light upon some of its aspects.

So much for the right and left flanks. Next to Optics stands Acoustics. And here, at least, one might have thought that sure ground had been won: the piano-theory of hearing, which bears the name of Helmholtz and Hensen, did seem to be an adequate and satisfying hypothesis. But Rutherford's publication, in 1886, of his telephone-theory of audition sounded a note of warning. And Waller's recent criticism of the older view, and adoption of that of Rutherford in a modified form, looks decidedly ominous.[1] More than that. While we, the psychologists, have been combating with might and main the notion that the semicircular canals have anything to do with hearing, and have been assigning them to the static sense, making them the sense-organ for the organic sensations of equilibrium and acceleration of bodily movement, here is Dr. Ayers, in the last number of the *Journal of Morphology*, telling us that we are old-fashioned and out of date, and that the semicircular canals haven't any function at all! Of a truth, the auditory column must gird up its loins to battle; for there will be serious fighting in the near future.

Smell and taste still lag behind. The author of a psy-

[1] The two theories are briefly as follows: According to that of Helmholtz-Hensen, the stretched radial fibres of the basilar membrane behave toward the vibrations of the internal cochlear fluid (endolymph) as the strings of a piano toward vibrations of the air caused by different notes. According to Rutherford, the membrane does not exercise this selection. Every cell of Corti is impressed by every audible vibration. By the intervention of the cells, the vibrations are translated into nerve-impulses, which correspond to them in frequency, amplitude, and form, just as in a telephone the sound-vibrations are translated by the iron plate and magnet into electrical movements which correspond to those of the sound received. Cf. Waller's Human Physiology, pp. 460, 461.

chological text-book published this year, gives absolutely no account of smell and taste; because, as he says, "almost nothing of psychological interest is known concerning them." That is over-stated; but, indeed, it is terribly hard to experiment satisfactorily in these two domains of sensation.

When we leave Sensation for Feeling—for the sphere of pleasure and pain, of pleasantness and unpleasantness—we find the plan of attack less organized, the number of men very much smaller, the ground only so far familiar that it is known to be dangerous. We cannot expect very great things, then.

Professor Muensterberg has been seeing what he could do on a skirmishing expedition. He practised himself in the execution of an arm-movement, ten or twenty centimetres in extent, centripetally and centrifugally. In the centripetal movement, the arm was flexed; in the centrifugal movement, extended. The movements were carried out when the subject was under the influence of various emotions—joy, sorrow, anger, and so on. It was found that in unpleasant "states of mind" the extension movements were too small, the flexion movements too large: in pleasant states of mind, on the contrary, the flexor-movements were too short, the extensor-movements, too long. And the writer says, "the psychophysical effect of these reflexly conditioned flexions and extensions is just that which we call pleasantness and unpleasantness." And then he goes back to the evolutional view of Herbert Spencer and Grant Allen; and says, 'Our ancestors grasped after the useful, drew back from the hurtful. Hence the pleasantness and unpleasantness of these movements; for the useful is the pleasurable, and the harmful is the painful.' Now, this hypothesis may be true enough, but it does not help us greatly toward the formulation of a psychophysical theory of feeling. This is, indeed, admitted by the author of a much more important contribution to our knowledge of the subject. Dr. Lehmann, of Copenhagen, in his recently published work "Die Hauptgesetze des menschlichen Gefuehlslebens," writes: "We must assume that pleasantness and unpleasantness are in all cases the psychical results of the relation between the consumption of energy necessary to the activity of the system at a particular moment, and the renewal of energy through the channels of nutrition." But he proceeds: "It is a great question, whether such a hypothesis can render us any considerable service in our practical investigations."

Dr. Lehmann's book is valuable for several reasons: It contains a long series of experiments upon the expression of the emotions, not by gesture, but in less obvious bodily changes, such as those in the tonus of the superficial blood-vessels. It deals also at length with the psychological conditions of feeling, with its dependency upon the train of thought, or of ideas. And it makes an attempt to classify feelings on a rational basis.

My space-limits forbid a description, much more a criticism, of the work. One thing one may say: the fact that it was found necessary to give the above-quoted formula so general a character, speaks decidedly against any special psychophysical theory, such as that of Meynert. Meynert regarded feeling as the accompaniment or index of the state of nutrition of the cerebral cortex; hyperæmia being attended by pleasure, hypæmia by unpleasant feelings. We cannot any longer regard the eupnoic or dyspnoic condition of the brain as the physiological substrate of feeling in general.

For my own part, I should like to see an attempt made to get at a theory of the sense-feelings, by examining them in their immediate relations to the stimuli occasioning the sensations, whose attendants the feelings are. We are, I think, too apt to look at feeling as the effect, not of stimulus, but of sensation. Would it not be possible to plot a curve which should express the relation of stimulus to feeling? The stimulus-ordinates corresponding to the threshold of feeling, to maximal pleasure and to pain, would seem to be fairly easily determinable. And others might be obtainable, as the subject became practised in the naming and describing of his states of feeling. It would, of course, remain to show what that property of stimuli is by virtue of which we react to them in the way of pleasure and unpleasantness.

And, thirdly, what of Conation? You know that there are various theories of the origin of will. These theories fall into two great groups: first, autogeneous theories—those which regard the will as a process *sui generis*, as fundamental and necessary a factor in mental life as are sensation and feeling; and a factor which introspection and experiment reveal to us as being separate, unique: and, secondly, heterogeneous theories, according to which will is not an ultimate of consciousness, but is derivable from the interplay of the basal processes—sensations, feelings, ideas, and so on. Both views have found representatives whose names carry great weight in psychology: both rest more on inner and outer observations than on experiment. This is almost inevitable, from the nature of the case. It would be difficult, indeed, to hit on a method for the experimental investigation of the pure volitional process. Just now, the autogeneous theory appears to be the more in favor.

The only recent article to which I have to call your attention under this head, is one published in *Science*,[1] by Professor Baldwin, of Toronto, entitled "The Origin of Volition in Childhood." Professor Baldwin maintains that the child's first exhibition of will is its repeated effort to imitate movements seen and noises heard. Will, on his definition, has three constituents: desire, deliberation, effort. Now, the child's consciousness is eminently suggestible: what it senses, it tends to imitate. Having imitated, it compares copy with original—deliberation. The comparison gives rise to the state of motor restlessness, or dissatisfaction—desire. A new, better-adjusted imitation follows, attended by the consciousness of the passage from polyideism to monoideism—from a state of mind in which many ideas are present to a state in which one predominates—which is the consciousness (the author calls it the "feeling") of effort. That is, given suggestion and the sensory-motor reaction, voluntary action supervenes as a matter of course.

Professor Baldwin has the right to define volition in his own way. With that we shall not quarrel. But we must get from him what he understands by suggestion. First, he says, comes the reflex; a single, definite, constant, motor reaction to stimulus, not involving volition. Secondly, we have physiological suggestion; a motor reaction is occasioned unconsciously or subconsciously by an extra-organic stimulus. This reaction is not quite so definite as in the case of the reflex. Then comes sensory-motor reaction; what other authors call the conscious reflex. Finally, the series culminates in ideo-motor suggestion, where the motor accompaniments are mostly due to association of ideas, and follow the laws of association.[2]

Again, I cannot attempt here to criticise this scheme at all adequately. Those who represent the autogeneous theory of will would tell Professor Baldwin that his notion of reflex-action is wrong; the reflex is just an originally volitional action, which has become mechanical by repetition. Then, again, one would urge that he has really told us nothing at all of suggestion, of its mechanism, the manner of its operation. He does, indeed, say in one passage, that the "hypothesis of one or more secondary consciousnesses" is a useful one. But of that sort of hypothesis the experimental psychologist tends to fight very shy. Thirdly, there can hardly be imitation without attention. The child does not repeat, imitate every noise and movement, but rather those which, in virtue of intensity, novelty, or some similar attribute, draw its attention to them. The reflexes, conscious as well as unconscious, may take place unattended to, unnoticed; but an imitative movement—more especially an imitative movement implying desire, deliberation and effort, surely presupposes attention. And is not the act

[1] November 15, 1892.

[2] Handbook of Psychology: Feeling and Will, pp. 297 ff.

of attention a process of will? Is not attention a fusion of will with—say, in this case—sensation? Professor Baldwin does not adopt this standpoint, though he gives no reasons, beyond general ones of probability, for his own.

I wanted to give you an instance of the difficulty which attaches to an investigation of conation, and of the difficulty which confronts the critic of such investigation. Professor Baldwin points to a certain—partly hypothetical—conscious content, and says: Here is the dawn of volition. We reply to him: On the contrary, that consciousness has been volitional for a long time; you are yourself talking in terms which presuppose the presence of volition at a certain stage of development. If he then insists on our granting his definition, we must rejoin, that though we are ready, for argument's sake, to do this, we cannot meet him on unknown ground, but must call for the justification of his position as regards suggestion and attention.

This brings us to the conclusion of our survey of the present state of research and opinion, as regards the three simple processes of consciousness—sensation, feeling, and will. You will expect me to say something before I conclude, of the work which is being done upon more complicated mental content. Here, I cannot pretend to follow any order of treatment. For I am not covering the ground of psychophysics, but of recent psychophysical investigation and publication.

Let me begin with two departments, which for many minds are coextensive with experimental psychology: I mean, with hypnotism and chronometry. Popular literature has fostered the delusion that these two provinces are all-important for the psychophysicist. And indeed, as regards the former, we ourselves are a good deal to blame. At the August Congress, there were several sittings devoted to the demonstration of hypnotic phenomena, and to the consideration of hypnotic "hypothesis"—one feels, at times, that conjecture would be the better word.

Professor Wundt has lately written a long essay, republished, by the way, in book form, on "Hypnotism and Suggestion."[1] The gist of his argument is, that though hypnotism has a great medical future before it, will play a very large part in therapeutics, the so-called hypnotic "experiments" are not experiments at all. For it is of the essence of experiment, that one factor in a complex phenomenon is varied at the will of the experimenter, while the rest remain constant. Isolation, repetition, and variation; these are the characteristics of the experiment of the natural sciences. Now, the success of a suggestion depends on circumstances which the "experimenter" cannot control. Then again, it is only by practice that he can secure uniformity of result; and uniformity here means a barren uniformity, not the fruitful one of truly scientific experiment. For it is characteristic of hypnotic phenomena that they admit of arrangement under a few practically constant rubrics. Lastly, experiments carried out during hypnosis show the most hopelessly divergent results.

It is a little better with the few serious theories of the hypnotic condition which are extant; those of Bernheim and Wundt deserve mention, perhaps, in the first instance. But even these depend very largely upon hypothetical physiological processes. So that I would leave the practice of hypnotism, just now, to the physician. He has to cure his patient: he is justified in groping for remedies, and in using these remedies, when found, whether he can explain their working or not. How much is known of the physiological action of many of the drugs in common use? But I am terribly ashamed when I see, as I did at the London Congress, an educated audience applauding the skill of the hypnotizer, and laughing with Olympian laughter at the ridiculous gestures or words of the subjects. And I should not think it justifiable, at present, to institute hypnotic "experiments" in a psychological laboratory. Rather let the psychologist go for his facts to the hospital.

[1] Philosophische Studien, viii., pp. 1 ff.

The discussion of reaction-times has come to be a lengthy chapter in experimental psychology. You are familiar with the phrase; the reaction-time is the time elapsing between the receiving of a sensory stimulus and the execution of a motor response to that stimulus. The earlier investigators in this subject thought that they were directly measuring the rapidity of thought. Later workers have continued to accumulate line upon line of figures, without (at least, in very many cases) troubling themselves as to the theory of the processes whose temporal relations they were examining.

A scientific treatment of psychophysical chronometry is only just beginning. The simple reaction, which was once thought to be a fixed and constant process, has been found to have three principal forms, each of which gives its own time-result. Longest of all is the simple reaction, when the attention of the subject is directed solely—as far as possible, solely—upon the sensory stimulus; while the reaction-movement comes in, so to say, as an after-thought. Shortest of all is the simple reaction, when the subject's attention is concentrated upon the movement to be carried out, in response to the sensory signal; and when the nature of this signal itself is comparatively indifferent for consciousness. A form of intermediate duration is the so-called central form. This best represents, probably, the reaction of everyday life; the anthropometrical reaction, if one may use that phrase. For it the attention is as equally divided between signal and response as may be.

Results obtained before these differences in the duration of the simple reaction were known or accounted for, are, plainly, worthless; or, if not worthless, they are only so far valuable as we are enabled, by the aid of new control-experiments, to bring them under some one or other of the three above-mentioned rubrics. Further, the complex reaction-times, choice-times, discrimination-times, etc., will give different temporal values for the special processes interpolated in their course, according as we compare them with either of the sub-forms of the simple reaction. The time required for the effecting of an association will be comparatively long, if we subtract the shortest simple time from the time of the association-reaction; comparatively short, if we subtract from the latter the longest simple time.

I have no doubt that the basis of comparison should be the longest form of the simple reaction; the sensorial form, as it is called. For in all complex reactions the attention is directed upon the sensory stimulus; the answering movement, even if it be itself an alternative or complicated movement, retires into the background of consciousness. And, if comparison is to be made between the long, complex times and a simple time, one should surely see to it that the conditions in the two cases are as nearly as possible the same.

There are only two recent researches to be quoted. The first of these I perpetrated myself. I compared the sensorial simple time for light stimuli with the times necessary for the cognition of letters, words, and colors. That is, the direction of the attention and of expectation was kept constant for all the experiments made. In this way I was able to reduce considerably the length of time stated in the text-books to be necessary for such a cognition. The result has this negative value: it shows that the assertions of older investigators have to be taken *cum grano*, if they have said nothing (and this is as often as not the case) of the trend of the subject's consciousness during their investigation. A positive value the figures can only obtain when the theory of the reaction-content is more complete than it is at present.

Dr. Dessoir, in the paper in Dubois-Reymond's *Archiv*, to which I have already referred, seeks to determine the time-relations of the sensations of pressure, cold, and heat; and of the sensation-feeling complex, pain. It is a common enough experience, that we sense a thing by means of touch, before we realize that it is hot or cold; that we sense the cutting of the knife before we feel the pain that the cutting occasions. What is the time-differ-

ence? First of all, the simple reaction-time for pressure had to be obtained. This was found to vary with the extent of the cutaneous surface affected by the stimulus, and with the part of the sense-organ employed. Then the time-difference between contact-sensation and sensation of cold was determined. Drops of cold water fell on sensitive areas of the skin; the subject made an electric current at pressure by closing a key; broke the same current at cold by opening it. The time was registered by a chronoscope inserted in the circuit. The same procedure was followed for pressure and heat. The smallest difference for cold was some 200 σ;[1] the smallest for heat, some 300 σ. It has long been known that the reaction to cold occupies a considerably shorter time than does the reaction to heat.

There followed experiments on pain. Water of a temperature of 72° to 80° C. was allowed to drop on the skin; the subject could distinguish the two successive sensations of contact and heat, and the succeeding feeling of pain. The least time-differences between the heat-reaction and the pain-reaction varied between 200 and 300 σ.

You must not attach any too absolute value to these figures. They are interesting, firstly, as putting in quantitative form a very common and striking experience; and, secondly, for the stimulus which they must give to physiological and psychophysical theory. But I have quoted in round numbers, and there are, apart from that, faults in the experimental method; several of which, to do him justice, the author would probably admit.

Two other problems of a complicated nature have been occupying psychophysicists of late. Of neither of them can we say that a final solution has as yet been given. The first is the problem of the so-called time-sense. If three sound-stimuli affect our ear—tap! tap! tap!—we are able to estimate with considerable—in the case of short times, with marvellous—accuracy the mutual relations of the intervals which they include. What is the basis of our comparison? What constitutes the conscious content, the association of whose elements enables us to formulate the judgment: the second interval is longer than the first, or the first is longer than the second? A very great deal of work has been done upon this question. Professor Schumann, of Göttingen, has just published a somewhat acrid criticism of this past work, and propounded a theory of his own. According to him, the important things for consciousness are the strain of the expectation, and surprise. We get used to an interval; our sensory attention adapts itself to that interval. If the "tap" comes sooner or later, we know it—in the first case, because it surprises us, before we are ready; in the second, because our expectation has been longer than usual on the strain, and so we become tired. A very simple theory on the surface, you see; a very questionable one in fact, I think. However we may judge of it, though, it is certain that it speaks in terms of the unknown. What is attention? Professor Schumann tells us that the time for a satisfactory theory is not yet; and he is quite right. What is the consciousness of strain? Professor Schumann says that he is not sure that it is not a feeling. Renewed investigation is needed; and this investigation is now going on, in more laboratories than one.

The second problem is the problem of recognition. I meet an acquaintance in the street, whose name I have forgotten. As I look at him, his face grows upon me, his name tingles on my tongue, and at last I say, with an air of pleasure and relief, Why! it's Brown!—and I feel foolish for not having thought of that before. What is the conscious content here? Obviously, in the simplest case, an idea plus the consciousness that the idea is known. An idea with a quality of knowledge, a quality of knownness, if I may coin the word, attaching to it. In just what does this quality of knownness consist? Wundt says, in a feeling: the specially colored recognition-feeling. He assumes, moreover, dark or subliminal ideas, which associate with the dominant idea; and here Dr. Lehmann follows him. James and Hoeffding appeal to practice. The same neural paths are re-excited in recognition that were excited in the original cognition (sensation or idea). A very great deal of experimental research is needed before the question can be finally answered.

And this brings me to the conclusion of my remarks. I have tried to give you a bird's-eye view of the whole field of psychophysical work. Those of you (if any there are) who are wholly unacquainted with the history of psychophysics, will yet, I hope, have gained from the survey some idea of what is going on in the psychological laboratories, and of the sort of problem that is exercising the minds of psychophysicists. A large part of the territory I have left untouched; let the instance of attention, with its extensive literature, suffice. My apology must be that no quite recent researches in that part have appeared.

[1] σ=one-thousandth of a second.

A NEW AND POSITIVE METHOD OF BLADDER EXAMINATION.

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THERE is no more strikingly brilliant picture of its kind than that which is furnished when an unobstructed view of the bladder-wall is gained through a cystoscope introduced into a bladder capable of maintaining a perfectly clear fluid of distention. But whoever is familiar with this method of examination must admit that it furnishes often but an obscure and uncertain picture, and in some cases none at all, upon which a diagnosis positive enough to consign a patient to a serious operation can be made. From the time I happened to make the first cystoscopic diagnosis of bladder-tumor in this country, up to the present day,[1] I have never yet failed to see enough in any case upon which to make a positive diagnosis as to the existence or not of growth, foreign body, or bladder lesion. This has been done, however, in many cases where the tendency to hemorrhage was great, only after much rest of the patient in bed and repeated and careful washings of the bladder. With a normal bladder a perfectly clear and beautiful picture can always be obtained, the uretal orifices readily found, and the vessels in the bladder-wall observed as they appear in clear-cut lines here and there on the pale pink mucous membrane. But in a diseased condition of the organ, whether from growth, stone, cystitis, or other cause, we must remember that we have often a ready tendency to hemorrhage; and that a distention fluid soon becomes tinged with blood or cloudy with pus, mucus, floating shreds of membrane, etc. Moreover, it is not always possible, when looking at an object through the cystoscope, to determine from its mere outline or color just what its exact nature is; that is, whether hard or soft, whether calculus, blood-clot, gray patch of mucous membrane, or discolored area of ulceration—this, of course, being the case where the distention fluid cannot be kept clear. Again, the size of a growth or object cannot be at once positively determined, as much depends upon the distance from the lens, etc.

In reality, then, many of the beautiful pictures which we place in our atlases of cystoscopy can only be made with exactness, when the object furnishing them has been brought to the light of day after operation, although enough may have been seen beforehand to furnish grounds for the advocacy of such operation. Under these conditions the cystoscopist must in many cases be under a certain sense of apprehension, until operation or other measures verify his diagnosis. In my experience I can fortunately say that no error as to the significance of the picture seen has yet been made; although in one case a small growth, thought by me to exist, was not found at the exploratory perineal operation made by the surgeon; but he later magnanimously admitted to me that a growth corresponding to that seen was afterward removed by the supra-pubic method.

In examining an obscure case of bladder-trouble on

[1] Boston Medical and Surgical Journal, April 18, 1889.

December 25, 1892, where the distention fluid soon became quite tinged with blood, it occurred to me that an object seen indistinctly in the region of the left prostatic base might be brought out more clearly by introducing the finger into the rectum and pressing the bladder-wall toward the window of the cystoscope. Upon doing this a striking result was obtained; the bladder-wall at once appeared as a blunt cone in the field of vision, and could be pushed as close as desired toward the window of the cystoscope, or placed with the end of the index-finger directly against it. This is very diagrammatically shown in the figure, which illustrates the procedure as it would be seen through an opening in the bladder-wall.

The possibilities of this method of visible palpation of

the bladder at once began to develop themselves. It could be seen, when the bladder-wall was pushed close to the window of the cystoscope, whether its surface were smooth or not, and its outline, as projected by the finger, regular. The thickness of the interposed wall could be readily determined, and also the fact established as to whether its consistence were hard or soft whenever the wall was pressed between the finger and the cystoscope. Points obscure, through any considerable distance of the fluid, were seen plainly when made to approach the window with the finger.

To anyone who has had experience in cystoscopy I think the value of this method of examination will be very apparent; but its novelty and interest can only be appreciated by practical demonstration in the living bladder.

I call this a positive method of examination because, with four to six ounces of distention fluid, the whole bladder can readily be manipulated into such position as is necessary, by the finger introduced into the rectum: or, if needed, by pressure over the supra-pubic region. But what is of most importance is the fact that where the largest proportion of vesical trouble is to be found, namely, at the bladder base, is the portion of vesical wall most readily accessible to manipulation.

The Citizens of Baltimore are trying to persuade the politicians to give them a hospital for contagious diseases.

ELECTRICITY IN HERNIA.

By JAMES I. MARCLEY, M.D.,

NEW YORK.

One would suppose that there would be very little "new under the sun" in reference to the management of hernia. I should hesitate to add to the volumes written on that subject during the past half dozen years, were it not for the fact that I believe I have something both new and important to offer. It is to the management of recent strangulated and old irreducible herniæ, that I desire to direct attention. I shall confine myself strictly and briefly to my own method of procedure, one which has given me considerable satisfaction, and which in strangulated cases has saved me much trouble, and the patient all risk of injury from taxis or operation. Many a case of strangulated hernia has been sacrificed, either because of the inability or the disinclination of the physician in attendance to operate, or because no competent help was within reach. This, in my opinion, need not be, since the "operation" which I propose is simple and open to all. All that is necessary for the successful treatment of recent strangulated hernia, is the possession of a fairly powerful (20–30 cell) battery of low tension. The patient is first placed in the most convenient position for reduction, such as is generally advised in the employment of taxis, and medium size fine sponge electrodes, moistened in warm saline solution, are used. The anode is placed directly over the tumor, the cathode within a couple of inches, when the current is turned on, gradually increasing its strength until as much as can be borne is passing. To measure the current is not necessary, although advisable. This should be passed steadily for from two to five minutes, or as long as the patient (in the absence of an anæsthetic) can bear it. On the removal of the electrodes, very gentle attempts at reduction should be made. If these are not almost immediately successful, reapply the sponges, and allow the current to pass as before. This should be repeated until reduction is easily effected. Taxis should be most gentle; no prolonged or rough handling is necessary. The following cases of mine will give an idea of the obtaining conditions and the results secured. I will state right here that in every case taxis was tried, both by myself and others, and proved totally ineffective. The cases would have been given over to the surgeon's knife.

Mrs. A. B——, aged fifty-two, umbilical entero-epiplocele, size of a hen's egg, and existing for ten years, came to my office December 10, 1888, suffering from strangulation. Constriction, moderately tight; tumor, bluish; twenty-four hours' duration. Repeated attempts at reduction by taxis, failed. Anode, over tumor; cathode, two inches to the left of umbilicus, when three applications were made, lasting in all about fifteen minutes, and on removal of electrodes for the third time, the hernia was reduced almost by a touch.

R. H. W——, aged thirty-five, railroad official, complete oblique inguinal enterocele, six months' duration, came to me the evening of April 5, 1892. The constriction was very tight; duration of strangulation, five or six hours; attempts at reduction by myself and others failed, the general opinion being that there was nothing left but to operate. Galvanism applied as described during five or six minutes, with three or four slight intermissions, was followed by reduction with very little effort.

J. Z——, aged twenty-seven, car carpenter, large scrotal enterocele of ten or more years' duration. Strangulated for about four hours: resisted all efforts at reduction by taxis, position, etc. In this case it was found necessary to continue the current, with numerous intermissions and constantly increasing strength, for fully half an hour. At each intermission gentle attempts at reduction were made, but half an hour relapsed before any apparent impression was made. Reduction was finally accomplished easily.

One more case, and I am done with this subject. George L——, two and a half years of age, neglected scrotal enterocele of two years' duration, was brought

to my office, May 15, 1892, with strangulated hernia. Duration of strangulation, about ten hours; constriction, very snug; tumor, very tense. After etherization, efforts were made by myself and others to effect reduction. Our efforts proved unavailing. One physician, Dr. Ewing, remarked that he had assisted at an operation a few days before, in a case identical, and expressed himself to the effect that an operation would be absolutely necessary. Anæsthesia was most profound; an extremely powerful current was run for (with intermissions) twelve to fifteen minutes, reduction then being fairly easy.

When the patient is very sensitive, or in the case of children, an anæsthetic is necessary.

My cases now number upward of twenty, and in none have I failed to reduce the hernia within from five to thirty minutes. Of course, it is understood that complicated cases may be met in which this treatment would not be successful, but fortunately they are very rare and need not be taken into account, as in the event of failure the operation may be done, no harm having resulted from treatment, and no material delay occasioned.

Irreducible Hernia.—In the treatment of old irreducible herniæ, the usual conditions to be overcome are from the formation of adhesions, and, in utero-epiploceles, and epiploceles, thickening and induration of the omentum. There are other rare causes for this irreducibility, as in a case upon which I recently operated, a congenital, complete oblique inguinal. Patient, thirty-five years of age; tumor composed entirely of omentum, which was spread out fan-shape, base measuring six inches; apex at external ring, one inch, which small portion completely filled both rings and canal, plugging them so well that, although the patient had never worn a truss, at no time had the intestines escaped, the rupture causing him no trouble or inconvenience, except through the large size of the scrotum. The irreducibility here was due to the disparity between the part to be returned and the openings through which it should pass, a condition that was unusual, as in most old irreducible herniæ of any size the canal is obliterated, or nearly so, the rings being approximated (the hernia direct) and widely dilated. It is to the ordinary forms of irreducible herniæ that my method is applicable, and in which it has been successful in nearly half a hundred cases. In fact, unsuccessful in only three—one an enormous scrotal entero-epiplocele, scrotum measuring twenty-six inches at junction with the body, and twenty-eight inches from side to side in line of raphe, irreducible over twenty years. Before reduction had been accomplished a violent effort on the part of the patient caused strangulation. The surgeon who saw him, and who operated, informed me that he found no adhesions, nor any other apparent cause for irreducibility. The other cases were quite similar, both becoming strangulated. An operation was deemed necessary, and as the patients lived at a distance, I did not see them, nor did I operate. The time usually necessary, according to my experience, to effect reduction, is from one week to one month. In one case over two months was occupied; this was an enormous scrotal entero-epiplocele, irreducible for twenty-one years. As in this case, it is often impossible to reduce the sac—but that is of small account—as a truss can be worn just as well, though the sac remain permanently down. The after-treatment of such cases will be reserved for a future article. The time required to effect reduction depends somewhat upon the nature of the case. Enteroceles yield quite quickly, as a rule; entero-epiploceles and epiploceles require much longer time.

For the successful treatment of irreducible hernia, a very low tension, galvanic battery of considerable power, medium size and small sponge electrodes are required. A milliampèremeter is not absolutely necessary, though for many reasons advisable, the gauge for current strength being what the patient can possibly bear. If scrotal, the current is passed directly through the hernial tumor. When this becomes too painful, anode is used on scrotum, moving it about from place to place; cathode, at junction of scrotum with body. In incomplete inguinal, femoral or umbilical, the anode is placed directly over tumor; cathode, very near by, the object being to get the polar effect as much as possible. The time occupied in a single sitting should not exceed fifteen minutes, interrupting frequently, care being taken to have the current traverse every portion of the tumor. After each treatment, attempts at reduction should be made, the tumor being not too forcibly kneaded and manipulated, in order to assist in breaking up any adhesions that may have been weakened or partially destroyed by the current. The following will illustrate the average run of cases, as I have found them:

Lewis P——, aged fifty-six, undertaker, large scrotal entero-epiplocele, irreducible ten years, in size as he expressed it, "As large as the hub of a lumber wagon, nearly as hard and tense." Numerous attempts at reduction had been made by different surgeons. I first saw him January 16, 1888, when treatment was begun. He was a good soldier, and stood an exceedingly hot current without complaint. January 21, 1888, after the fourth treatment, reduction was accomplished with the greatest ease, the necessary manipulations taking not over a minute or two.

J. W. S——, aged sixty-five, merchant, complete oblique inguinal enterocele, size of hen's egg, irreducible ten years; has suffered very much, being obliged to wear a hard, slightly convex truss-pad, with considerable pressure over the tumor to prevent strangulation, which had occurred several times when attempting the use of a concave pad, or to go without any. Being a gentleman of wealth, he had consulted many prominent surgeons. No hope of relief was offered except through an operation. He consulted me June 2, 1889. Treatment was at once begun and repeated every other day. On July 1, 1889, reduction was accomplished, and a truss applied, which is worn with comfort.

John W——, aged twenty-six, railroad engineer, scrotal entero-epiplocele, irreducible three years. Tumor, the size of a goose egg. Began treatment March 1, 1891; daily applications. March 16, 1891, reduction effected. Mr. W—— had consulted several physicians before coming to me, among them an emeritus professor of surgery, the unanimous opinion being that an operation was demanded, on account of the liability of strangulation, owing to the nature of his occupation, and to the fact that he was on his engine away from home, out of the reach of aid most of the time, and could wear nothing in the way of protection.

L. W. M——, aged thirty-two, bookkeeper, very large scrotal entero-epiplocele, scrotum measuring fourteen inches in circumference, irreducible twenty years. Many attempts at reduction had been made. Consulted me, January 10, 1892. Treatment began and repeated every second to third day. In about four weeks the intestine was reduced, the large mass of omentum going slowly. There is a question in this case—if there is not still some omentum down, the scrotal tissues are very much thickened, the sac is surely down and thickened—but I can not satisfactorily determine the presence of omentum. If there is any, it is very little. One reason for feeling that there is no omentum left, is that he has worn a truss with convex pad, continually for several months without discomfort, which would not likely be the case were omentum present and pressed upon by the truss-pad.

John S——, aged fifty-eight, brewer, large scrotal entero-epiplocele, fifteen years' duration, irreducible eight years. Began treatment August 1, 1889; treated every second to third day; reduction accomplished, September 3, 1889, and a truss applied which was worn with comfort till his death, which occurred from Bright's Disease, about one year later. As to the rationale of my treatment, I shall have the pleasure of explaining my theory in a future article. I shall then also have something to say in reference to the treatment for the "radical cure" of ordinary reducible hernia, taking advantage of the cataphoric action of the galvanic current.

41 West Thirty-Fourth Street.

ACUTE INFECTIOUS PHLEGMON OF THE PHARYNX, FOLLOWING FOLLICULAR TONSILLITIS—DEATH IN SEVENTY-TWO HOURS.

By S. KOHN, M.D.,

NEW YORK.

That follicular tonsillitis may, under certain circumstances, produce a fatal result rapidly, is proven by the case whose history is herewith appended.

L. H——, aged forty-five, was seen by me for the first time on the evening of October 20, 1892; he was taken sick the afternoon of October 19th, with a "sore throat."

Previous history, excellent; he had never been sick a day as long back as he could remember; had led an out-of-door-life by reason of his business, but had never done any hard work.

As he stood before me, his complaints were of pain in swallowing and in speaking; the few words that he could articulate were spoken in the peculiar thick, throaty voice indicative of quinsy. He had just returned from an errand, as I came into the room, thus showing that his physical strength was still good; he had not been in bed a minute by reason of his throat trouble. Examination revealed a number of white spots on the left tonsil, characteristic of tonsillitis follicularis; some œdematous swelling of the faucial pillars, of the glosso-epiglottic folds, and of the mucous membrane and submucosa of the left oropharynx; tongue slightly swollen. The temperature in the mouth was 101½° F.; pulse 100, and good.

As his principal complaint was dysphagia, which seemed due to the tonsillar swelling, induced by the clogged follicles, I compressed the left tonsil with my index-finger, emptying the inflamed follicles of their cheesy and purulent contents.

This manipulation, in my experience, invariably serves the purpose of relieving patients suffering from follicular tonsillitis, for the time being at least, of the feeling of fulness in the pharynx, and of enabling them to swallow with comparative ease; previous to this manipulation, in many cases, the patients cannot be induced to even attempt to swallow, so painful is the act.

I would say here, parenthetically, that I consider expression of the tonsils of great value in the treatment, because it immediately enables the patient to take nourishment, which is of prime importance in a disease so apt to be accompanied and followed by prostration of the vital forces.

To my surprise, however, in this case the patient was unable to swallow easily after I had emptied the follicles of their cheesy contents. By inclining his head forward he could gulp down a little more milk than before the manipulation, but every swallow was accompanied by a facial grimace, and the easy deglutition which I had expected to follow the relief of the local swelling in the pharynx did not manifest itself; this fact, together with the difficult voice-production, led me to the conclusion that œdema had extended further down into the throat, implicating the entire larynx and lower pharynx.

I should have liked to make a laryngoscopic examination, but had not the necessary instruments with me.

As the patient's strength was good, as his fever was insignificant, and as he was up and about, I did not dream of an unfavorable outcome. The treatment was muriated tincture of iron with chlorate of potash in small doses, and corrosive sublimate also in minimal doses; a gargle of boric acid; a nutritious diet, and stimulants; the nourishment was ordered to be given in small quantities, at intervals of fifteen minutes.

The following morning there was swelling of the submental connective tissue, giving the face an elongated appearance; this swelling was quite hard, and extended to the connective tissue of the left side of the neck; there was no marked glandular swelling, but an infiltration of the connective tissue of the chin and neck (left side, subparotid and submaxillary region). The tongue was swollen to twice its natural size, being raised almost to the roof of the mouth, by the swelling of the mucous membrane and underlying tissue of the floor of the mouth. The gums on the left side of the lower jaw were œdematous; on pressing them some oro-pus exuded by the sides of a few decayed roots of teeth.

The patient was still unable to articulate, and when asked what pain he had, pointed to his sternum, and gave utterance to a grunt which I interpreted as meaning raw—to which interpretation he assented. The swelling in the pharynx had entirely disappeared, but still swallowing was attended by great difficulty. Temperature, 102½° F.; pulse, 110, and weak.

The connective-tissue swelling of the chin and neck looked like that met with in angina Ludovici. The patient was walking about the room. I saw him again in the evening before he had retired. The submental swelling was diminished and there was no interference whatever with respiration. There was some mucus in the throat, which the patient was unable to expel easily. As this is often noticed in quinsy, being due to the paretic condition of the expulsive muscles from inflammatory œdema, it did not seem worthy of especial consideration. The tongue was still swollen; the connective tissue of the floor of the mouth, chin, and left side of the neck still infiltrated and hard.

Auscultation revealed no sound whatever indicative of obstruction in the upper air-passages. Temperature, 101½° F.; pulse 108, and good.

I left the patient, with the determination to make incisions into the swollen tissues the following morning, unless some decided improvement occurred. The following morning, the second morning that I called, the patient lay dead in bed. His wife, who occupied the same room, lying on a cot, and who was watchful of him all night, was unaware of his death. She stated that he had been restless the first part of the night; that he had swallowed small quantities of liquid nourishment, and some stimulants, and that toward morning he had fallen asleep. She noticed no struggle for breath, no loud râles, or any sounds whatever accompanying his breathing, which might have indicated an occlusion of the upper air-passages. The quiet on-coming of death warrants, it seems to me, the assumption of cardiac paralysis as the cause of the fatal termination. Not knowing how long respiration had ceased, I made attempt at artificial respiration; the gust of gas expelled from the mouth by the compression of the chest-walls was so horribly fetid as to compel everyone to leave the room; the odor could be compared only to that of a human corpse in an advanced state of decomposition, and this was, at the most, two hours after death. A post-mortem examination was unobtainable.

The reasons why this case is of rare interest are the following: 1. Because under the guise of a follicular tonsillitis, an acute septic (?) infection overwhelmed the nerve-centres, and within seventy-two hours after the onset of the disease caused death by heart failure.

2. Before any operative procedure was fairly indicated, the patient was dead; laryngeal œdema, for which tracheotomy or intubation might have been done, had not manifested itself in any way. The inflammatory infiltration of the cellular tissue of the chin and neck was so diffuse and hard that incisions were out of the question; it was too early for fluctuation to have shown itself, and I deferred making any incision until I could be reasonably sure of evacuating pus.

3. The case is interesting because of the rarity of these cases, reported in medical literature, whatever may be their frequency in practice.

Senator,[1] who first called attention to this as a distinct disease, in a very interesting article on "Acute Infectious Phlegmon of the Pharynx," reports four cases in his experience, all fatal. In everyone of these cases, the autopsy revealed the same conditions: enlargement of the spleen and liver, parenchymatous nephritis, gastritis; hyperæmia of the mucous membrane of the intestinal tract, with, in some cases, small submucous hemorrhages.

[1] Berl. Kl. Wochenschr., 1888, No. 5.

Koch and Langerhans, at the instance of Senator, looked diligently for a specific micro-organism in all these cases, but found none.

Senator's conclusions, in his own words, are: "We have become acquainted with a new disease, a new danger, and not at all rare, without knowing how to avert it."

Bresgen[1] disposes of the disease in a few lines. He is not inclined to regard it as a specific one, but as a severe form of suppurative inflammation. This opinion seems to me to be a mistaken one, for suppurative inflammation of the pharynx, as any physician who has treated this class of diseases knows, even when it is so severe as to cause infiltration of the subcutaneous connective tissue, as often happens in children, does not kill the patient before fluctuation shows itself, unless it asphyxiates the patient by mechanical pressure. The physician usually has the satisfaction in these cases of evacuating the pus and relieving his patient.

In all ordinary cases of suppurative disease of the pharynx, and even in angina Ludovici, we can usually wait patiently until fluctuation manifests itself, when surgical methods will afford relief.

But in nearly all of the cases of acute infectious phlegmon reported, the patients had been previously in excellent health, had been attacked suddenly, and had died very shortly after the onset of the attack, in spite of any and every treatment. The histories of the cases all read alike, and point to a paralysis of the nerve-centres by an acute infection.

Bosworth[2] gives a complete *résumé* of the literature, and an interesting article on the disease (p. 64), but he does not report a case in his own experience.

Cruveilhier, as early as 1829, described a case of acute inflammation of the pharynx with gangrene of the affected tissues, death occurring on the sixth day.

For the literature, the reader is referred to Bosworth's article (*loc. cit*). In all, eleven cases have been reported.

The conclusions reached by the writer before looking up the literature, based on the apparently benignant onset, the rapid manifestation of local swelling upon the same side as the follicular tonsillitis first appeared, the absence of any marked change in any of the vital organs, and the rapidly fatal termination, were—that, from the tonsil as a point of entrance, the infection had followed the track of the lymphatics of the neck, and thence had entered the circulation and rapidly overwhelmed the nerve-centres.

The excellent previous history of the patient, and the rapid course of the disease, warrant the conclusion that death was caused by a most acute blood-poisoning.

THERAPEUTIC USES OF HYPNOTISM.[3]

By HENRY HULST, A.M., M.D.,

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THE object of this paper is not to convince you of the genuineness of the phenomena of hypnotism. That, I think, is no longer necessary. Neither shall I dwell on the history of the subject, though it is full of interest, but proceed at once to give an analytical account of my clinical experience with it.

Since I left Europe (I arrived home October 1, 1892) I have made and recorded 421 experiments in hypnotism, besides one made before the journey, in all 422.

These experiments were undertaken partly for psycho-physiological, but mostly for therapeutic, purposes. I operated on 66 persons, aged variously from three to sixty-one years, 28 of whom were males, and 38 females. The degree of hypnosis induced varied—some patients sleeping profoundly, others lightly, still others not at all. The deepest form of hypnosis produced in any given case was not, as a rule, obtained at the first sitting, although this occurred in some instances.

In the following table, intended to show the hypnotizability of my cases, I use the division of hypnosis adopted by Forel, for the sake of its simplicity.

	Males.	Females.	Total.
Somnolence	7	6	13
Hypotaxia	15	21	36
Somnambulism	5	10	15
Not influenced	1	1	2
Total	28	38	66

No doubt some of the cases classed under somnolence would have reached hypotaxia and somnambulism, if the experiments had been repeated oftener. Six of the thirteen were hypnotized for purposes not therapeutic. The remaining cases were relieved of gastralgia, pain in axillary abscess, backache, headache, toothache, and rheumatic pain, besides one other case to which I shall refer later on. I mention these cases particularly to call attention to the fact that the lightest form of hypnosis may be very valuable.

The most striking thing in the table is, perhaps, the small number of refractory cases I met with, only 2 in 66. Such, however, seems to be the rule. Wetterstrand, who conducts a psycho-therapeutic clinic in Stockholm, failed to hypnotize only 97 out of 3,148; Van Renterghem, in Amsterdam, 7 out of his first series of 178; Liébault, 27 out of 1,011. Schmidkunz[1] says that under proper conditions ninety-four to ninety-seven per cent. of all people can be influenced. "Bernheim,"[2] says Moll, "refuses the right to judge of hypnotism to all hospital physicians who cannot hypnotize at least eighty per cent. of their patients. Forel fully agrees with him." Indeed, the latter alienist says:[3] "Every mentally sound individual is hypnotizable." The insane are hypnotizable with great difficulty, or not at all. Auguste Voisin,[4] however, stated in his very interesting "Indications de l'Hypnotisme chez les Aliénés," to the first International Congress, that he tries hypnotism on all insane cases which enter his service, and finds that he can hypnotize about ten per cent. Popular opinion holds that a certain amount of weak-mindedness predisposes to hypnosis. The reverse comes nearer the truth. One of my cases illustrates very beautifully the effect of alienation upon hypnotizability. My records show that when she was most disturbed hypnosis was most superficial and difficult to induce. Later on, when her mind cleared up and became free from hallucinations and delusions, she became a good subject. One of my two refractory cases was suffering from hysteria. Those who use hypnotism daily are pretty well agreed that some cases of hysteria, neurasthenics, hypochondriacs, and insane persons are least hypnotizable.

I have employed psycho-therapeutics, as the clinical application of hypnotism to disease is frequently termed, very largely as an analgesic, to relieve or cure various aches and pains.

	Times.		Times.
Toothache	14	Rheumatic pains	6
Pain from axillary abscess	1	Dysmenorrhœa	8
Headache	23	Pleurisy	2
Backache	16	Ovarian	2
Scarlet fever sore throat	1	Earache	1
Chest-pains (bronchitis)	3	Gastralgia	1

The above experiments were without exception successful.

In somnambulism, more or less complete anæsthesia I found to be the rule; but I have frequently caused it even in hypotaxia by way of experiment. Although hypnotism will never usurp the place of chloroform and ether, it is

[1] Krankheits- und Behandlungslehre der Nase-, Mund-, und Rachenhöhle, etc., p. 250. 1891.
[2] Diseases of the Nose and Throat. 1892.
[3] Read before the Academy of Medicine of Grand Rapids, January 16, 1893, with demonstration of three cases.

[1] Psychologie der Suggestion, p. 152.
[2] Hypnotism, Contemp. Science Series, p. 47.
[3] Hypnotism, Wood's Monographs, vol. v., p. 172.
[4] Comptes Rendus, p. 147.

possible to render many minor and even capital operations painless by means of it; the patient watching every step of the operation and assisting if desired. But my experience with it for this purpose is limited to three cases, in one of which I hypnotized a girl to enable one of our dentists to extirpate some dental nerves, without pain and without memory of what had been done to her, on awakening. The other I hypnotized for Dr. B. Earle, to enable her to lance a boil on the cheek of her patient without pain. Although anæsthesia was not produced, hypnosis being superficial, the patient felt the pain from the cutting less acutely. The third case is mentioned later.

I will now go on to give a somewhat more detailed account of some cases, which go to show that it is not the sensory portion alone of the nervous system that is amenable to treatment by hypnotism.

Lucy W——, aged thirteen, has not yet menstruated. For years she has suffered from chronic constipation and its results: pain in the side, backache, want of appetite, and marasmus. November 5, 1892, she applied to me for psycho-therapeutic treatment. Since then her bowels have moved every morning after breakfast, with two or three exceptions, without medicine. The side- and backache have ceased to trouble her, her appetite is famous, and she is growing fat. Her case will serve also to show the terrible efficacy of suggestion in hypnosis, and thus caution us to be circumspect in the use of so potent an agent. December 1, 1892, I said to her in deep somnambulism: "You will drink a glass of water every morning before breakfast." Twelve days after, when I met her mother the latter asked me: "Did you give Lucy any suggestion about drinking water?" She proceeded to tell me that of late Lucy had acquired the habit of drinking cold water before breakfast. She noticed her several mornings in succession, taking a glass and going to the water-pail. She said she suggested to Lucy that it was better not to wet a glass each time, but to use the dipper. Lucy is an exceptionally thoughtful and obedient child otherwise, but she continued to get her glass of water. Finally, one morning Lucy's mother followed her, glass in hand, to the pail. She filled the dipper, hesitated a moment, and, to cap the climax, poured the water out of the dipper into the glass and drank it. Astounded at this strange conduct her mother at once suspected its real cause, and asked: "Lucy, what makes you act so?" Answer: "I don't know, ma; I can't help it." "Did Dr. Hulst tell you to do so?" "No, ma." I had faithfully tried regular habits, dieting, and cascara in this case for three years without effecting a cure.

In one other case, I have treated chronic constipation psycho-therapeutically. Both cases have been entirely successful thus far. Its action as a cathartic is sometimes surprisingly prompt. As such I have used it seven times. It is occasionally possible to obtain almost instantaneous results. I have succeeded within two minutes in hypnotizing a patient, awaking him, and causing his bowels to move.

Eight times I stopped epistaxis by simple suggestion in hypnosis, in a girl who has been subject to frequent and severe attacks for many years, bleeding sometimes for hours at a time. I was about to plug her nostrils, other measures having failed, when it occurred to me to hypnotize her. I did not even make her sit down, but put her asleep standing over the basin into which the blood was dripping. The hemorrhage was arrested at once and completely. This was November 25, 1892. I had occasion to repeat the experiment six times before December 12, 1892. That day, at 5 P.M., I placed her in deep somnambulism and impressed upon her that her nose would bleed immediately after dinner. On awaking, she had no conscious knowledge of the events that had taken place during hypnosis. At 6.30 P.M., after dinner, her nose began to bleed and she came to me to stop it. She was again hypnotized, the bleeding was arrested, and while she slept I explained to her that, just as I had caused her nose to bleed, I now willed the hemorrhage never to recur. Thus far the epistaxis has not returned. Twice I have caused menstruation experimentally in different patients; once just after the normal period had ceased, and once about two weeks before the regular time.

Those who have had chilblains know how very painful and real they are. A patient who is troubled by them every winter came to me for relief. Knowing that she is a good subject, I treated them psycho-therapeutically two weeks ago (December 31, 1892). Since then her feet have not pained her at all, and the chilblains have actually disappeared.

I have treated two cases of insomnia. In the first case the sleeplessness was due to a chronic catarrh of the bladder, causing frequent micturition, and necessitating the patient to empty the bladder from five to ten times each night. Although the patient does not enter deep hypnosis, two or three treatments sufficed to produce a complete change. The ardor urinæ has disappeared, she now gets up only once a night to empty the bladder, and that painlessly, and sleeps well the rest of the time. Some nights she does not have to get up at all. The other case was one of long standing, who was prejudiced against hypnotism. A "mesmerist" had attempted on several occasions to get her "under control" without much effect, except that the effort brought on each time a sick-headache, lasting two days. In spite of all this, she became one of my best somnambulists. At no time was hypnosis followed by headache; on the contrary, she never left my office without a positive feeling of well-being, and her inability to sleep at night disappeared after the first hypnosis.

I have had a letter from her since, stating that the cure remains permanent.

Of leucorrhœa treated by hypnotism, I have one case. This, however, was not the only symptom of which the patient, an unmarried girl aged nineteen, complained. Since her attack of acute rheumatism nine months ago she had had constant backache with constipation, dyspepsia, and mitral insufficiency. On coming out of her first hypnosis she declared that her back was well. Two days later she reported that the vaginal discharge had ceased entirely. Later on her bowels became regular, and whereas formerly she ate two meals each day, she now relishes three and seems to digest them well. The backache came back two or three times, but was each time promptly removed by suggestion. The heart-valves seem to remain in *statu quo*.

To modify taste I have used hypnotism on two cases. One, a boy ten years of age, has an unsurmountable antipathy to sweet things. One of his aunts has had the same perversion. Although the hypnosis reached is not profound, he is beginning to eat sweet things, and says they are not so distasteful as they used to be. Lucy, whose case I mentioned before, detested cod-liver oil and all kinds of fats. A single hypnosis sufficed not only to cure her, but even to create in her a positive craving for them.

As a moral agent to correct bad habits, I am using hypnotism on four cases. W. F——, aged eighteen, was brought to me by his father and brother, who were at a loss as to what to do with him. They had threatened him with the Reform School. He often came home from work in the forenoon without any apparent reason. When asked why he did not remain at his work he generally answered: "I don't feel like it." He has a good appetite, enjoys splendid health, is vain of his dress and person, but moody and irritable, and has threatened to beat his father. I could detect no insanity; moral perversion, perhaps of masturbatory origin (he confessed his addiction to the vice), was all I could discover. He consented finally to be hypnotized, entered advanced hypotaxia, and for a few days seemed to be undergoing a change. Finally he refused positively to be cured, and said his parents must consent to his going into the army, or send him to the reform school. They could not induce him to return for treatment. The second case is under treatment for the tobacco habit, and the other two are chronic alcoholics. The cure in the last two cases promises to be radical.

The remaining experiments were for idiocy, tic convulsif, multiple sclerosis, and enuresis. These cases have not been perceptibly benefited so far. I am using it in a case of epilepsy, with what results time must tell.

My experience with hypnotism in obstetrics is limited to one case. Hypotaxia was induced, and the patient did not awake when the uterus contracted. She appeared like one in obstetric anæsthesia. The last pain woke her up, but she immediately went to sleep again. She said she suffered much less than in former labors.

This afternoon, January 16, 1893, I succeeded easily in hypnotizing a man per telephone.

Such has been my experience with hypnotism. "Another 'ism'—hypnotism—is on its trial," says a writer in No. 8, vol. ii., 1892, of the *Lancet*, and adds, "but I fear nothing will be gained in medicine by its employment." A member of the Academy of Medicine of Grand Rapids, when asked by a son of the patient I hypnotized this afternoon per telephone, what he thought of hypnotism, answered: "It's all a humbug." This afternoon also, Dr. House, the dentist, extracted this patient's peccant molar, while I kept him in hypnosis, without suffering a shadow of pain, and with perfect amnesia on awaking. Is chloroform perhaps a "humbug?" John Hunter, who said a century ago that there is no normal function of the body, voluntary or reflex, that cannot be influenced by a simultaneously existing psychic state, had more of an insight into the truth.

Is hypnotism without danger? Can it do harm? Such questions I am asked daily. I think that depends upon how it is used. Thus far I have nothing to regret. It is an exceedingly sharp two-edged blade, and should not be put into irresponsible hands, nor used carelessly nor ignorantly. Wetterstrand has induced hypnosis about sixty thousand times, and says he has never seen nor heard that one of his patients felt the worse for it.

SOME ADDITIONAL REMARKS ON KNEE-JERK.

By JOHN FERGUSON, M.A., M.D. TOR., F.R.C.P. ED.,

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In the "Lectures on Some Points in the Treatment and management of Neuroses," delivered by Dr. E. C. Seguin before the University of Toronto Medical Society, we find the statement, on page 15, that in impending bromism the knee-jerk becomes exaggerated; and again, on page 96, we find the remark, while describing the condition of a banker who had been overdosed with bromide, "his knee-jerks were greatly exaggerated."

To these let me add the notes of three cases on this point. The first was that of a well-to-do married lady, for whom I had ordered a bromide mixture. She did not read the instructions carefully, and took one tablespoonful instead of one teaspoonful every four hours. The result was pronounced bromism. All the symptoms of bromism were well marked. The knee-jerk on both sides was greatly increased. The second case was a widow lady for whom bromides had been ordered by someone for excessive sexual desire. When I saw her she was in a condition of bromide narcotism. The knee-jerk in this case was extremely active. The third case was that of a young woman whom I saw in consultation with her physician. She was the victim of epilepsy. I recommended the bromide treatment, with regulated dietary. My interest in the case ceased at this point. Some two months after I saw her again, when she was in a state of profound bromide narcotism. There were on her body a number of hideous bromide ulcers. The knee-jerk was excessive.

How does the bromide act in such cases so as to cause this exaggeration in the jerk? Certainly not by exciting the reflex. The bromides depress the lower and spinal centres. The true explanation is to be found in the fact that the bromides exert their greatest influence on the cerebrum. Thus, while the lower centres are depressed to some extent, the cerebral cortex is depressed to a far greater extent, and the true ratio between them is lost. Thus it is that the control of the cerebrum is removed and the knee-jerk becomes excessive.

In my paper on the diagnostic and prognostic value of the knee-jerk, New York MEDICAL RECORD, July 2, 1892, the fact has been mentioned that when the cerebral control is destroyed, patients with locomotor ataxia may have a return of the jerk. This has been well illustrated in one of my ataxic patients, who occasionally gets drunk. In my paper just referred to it was shown that persons under the influence of alcohol exhibited an increase of the knee-jerk, just as in bromism. The above ataxic who had no reflex when sober, had one when well narcotized with whiskey or brandy. In this condition the control of the cerebrum was annihilated and the feeble impulse that found its way through the reflex arc was sufficient to produce the jerk when liberated from the control of the cerebrum. J. Hughlings Jackson has shown that an ataxic had a return of the jerk after an attack of hemiplegia. Alcohol is equivalent in this regard.

Philip Zenner, of Cincinnati, in the *Alienist and Neurologist*, July, 1892, gives an account of a tumor of the pineal gland. The tumor was one and one-quarter inch by one and three-quarters inch, and by pressure had caused marked hydrocephalus. The pressure would of necessity be pronounced on the cerebellum and the peduncles leading from it to the cerebrum and pons. The point of special note is that "the knee-jerk was at one time elicited on the right side, and then not elicited at all on either side." Here we have a case of tumor so situated as to do damage to the cerebellum by pressure, and with this the disappearance of the knee-jerk. In my former papers I have given examples of the loss of the knee-reflex, from tumor in the cerebellum or pressing upon it.

In *Brain*, 1891, page 304, H. B. Donkin puts on record a very interesting case. There was no discoverable organic disease anywhere. The illness came on after severe excitement, fright, and shock. "There was a slight general want of co-ordination of movement; the knee-jerks, elbow-jerks, and wrist-jerks were excessively marked, and there was distinct, though not great, ankle clonus on both sides; general sensibility was apparently normal, and there was no affection of the disks, or any impairment of the special senses. Dr. Donkin remarks that this is a case coming strictly in the category of functional disorder after shock.

In apposition to the above, I have known two cases where the reflexes were greatly exaggerated after fright. This would be what we should naturally look for when the true mechanism of the reflexes is borne in mind. The cerebrum, in the normal, healthy condition, exerts an inhibitory control over the lower centres for reflex action. In the condition produced by fright and mental shock all the factors are found that are well calculated to interfere with the proper cerebral control. The brain is depressed by the shock, and has not the same influence over the spinal cord to control the reflexes.

With regard to complete transverse lesions in the cord, I have in my former papers referred to some reported cases and recorded a few of my own. In addition to these, Dr. D. L. Davies[1] gives a brief account of a case of fracture of the spine at the fifth cervical vertebra. The injury to the cord was very complete. The patient died three days after the injury. The knee-jerks were absolutely lost. To this point the author of the paper calls special attention, remarking that this is contrary to what is generally held to be the case in such injuries. See Mr. Baker's case[2] of fracture dislocation at seventh cervical. The knee-jerk was entirely lost permanently.

Since my former papers I have seen in consultation a case of fracture dislocation at the level of the fourth dorsal vertebra. Two months have now elapsed since the injury, and there has been, as yet, no return of the knee-jerk, and the muscles of the legs still remain flaccid. If the increase of the knee-reflex was in any way dependent

[1] British Medical Journal, p. 1360, vol. i., 1892.
[2] Lancet, 1887, vol. ii., p. 261.

upon degeneration in the motor paths in the cord, it would have returned by the end of two months, as by this time degeneration would be well marked. From the above two cases, along with my own, the only conclusion that can be drawn is that, in the event of a complete transverse lesion in the cord, above the spinal centre for the knee-reflex, some stimulation is cut off, and consequently the reflex is lost. J. Hughlings Jackson calls this stimulation "the cerebellar influx."

In *Brain*, 1891, p. 296, Dr. H. Handford reports a case of cerebral tumor, the tumor occupying the cortical centre on the right side for the left leg. The leg was much weakened, though not quite paralyzed. "The knee-jerks were active and equal on both sides. There was an Achillis-jerk on the left, but none on the right; no ankle-clonus. Triceps-jerk on the left, none on the right; thumb-jerk equal on both sides; jaw-jerk could not be obtained." From the above statement it is clear that the deep reflexes were more active in the left leg than in the right—there being an Achillis- and triceps-jerk in the former and not in the latter. This could not have been due to any descending degeneration in the cord, as it was found to be perfectly normal. The increase of the deep reflexes in the above case can be explained only on the ground that the inhibitory power of the cortex of the brain over the left leg was to some extent lost, owing to the tumor on the leg-centre. The cortical matter, though injured by the tumor, was not wholly destroyed, being crowded aside by the tumor. In this respect the case differs from a destructive lesion of the cortical tissue.

As bearing upon the above case of cerebral tumor, I shall here mention the case of a young man I have under treatment at the present time for a syphilitic affection of the left motor cortical area. The arm and leg on the right side are paretic, but this is now passing off. There is considerable motor aphasia, also improving. At first, the knee-jerk, on the right side, was greatly exaggerated; but this is disappearing as the paralysis is lessening. It will thus be seen that, as the damage to the cortex is being removed by treatment its controlling power over the knee-reflex is returning, and this latter gradually approaching the normal. In this case, again, there is complete proof that there may be a greatly increased degree of activity in the deep reflexes without a descending degeneration in brain or spinal cord. It also affords proof of the view that the cerebral cortex is inhibitory toward the knee-jerk. We may infer from it also that the spinal cord receives a stimulus from some source; and that this stimulus produces the excess when the cerebral control is cut off.

In typical locomotor ataxia, it is well known that the knee-jerk disappears early in the great majority of cases. The ground taken by Westphal at first, that it did so in all cases, he found to be incorrect, and finally modified his statements so as to admit that in some cases the reflex was even exaggerated in the early stage of the disease.

Weir Mitchell has reported a case where the ataxia began in the arms. The patellar tendon reflex was increased, while deep reflexes were lost in the arms.

There is a case of great interest reported by F. Martius. He states that the tendon reflexes at the knees were retained throughout life. The examination of the cord showed that the lower part of the dorsal and the lumbar regions were not implicated in the characteristic degeneration of tabes. The upper dorsal and cervical regions were extensively involved.

Professor Eichhorst, in his recent work on the pathology of the nerves, records a case where the knee-jerk was lost late in the disease. The patient died of apoplexy. The examination revealed the fact that the upper part of the cord was very typical of tabes. The lower dorsal and lumbar portions were normal. How, then, was the loss of the knee-reflex to be explained? Careful examination demonstrated that the anterior crural nerves had undergone extensive degeneration from neuritis, which is one of the later complications of ataxia. This case is one of more than ordinary interest.

Fred. Peterson (*Journal of Nervous and Mental Diseases*, 1890) mentions a case of locomotor ataxia of the very rare form, where the disease seems to descend in the cord; or, rather, to begin at successive epochs, lower and lower in the cord, until the lumbar region is involved. In Peterson's case the knee-jerks were at first exaggerated, and at last abolished. The exaggeration in the early stage of the disease was probably due to the extension of the sclerosis into the lateral tracts—a condition of things by no means uncommon in tabes. This would shut off the cerebral control to some extent, and the reflex would become more active than normal. When the posterior columns, in the lower dorsal and upper lumbar regions, became diseased, all this was reversed, and the jerk finally disappeared.

A few notes on two cases of tabes dorsalis of irregular clinical history, taken from my case-book, may assist in throwing some light on the subject of the knee phenomenon. When the patient, male, aged forty-three, first consulted me he complained of sharp darting pains running round his body at the level of the umbilicus. With these there were paræsthesiæ, feelings of pins and needles, creeping, etc. The conduction of sensation from the region of the umbilicus was greatly retarded, two seconds being required for perception. The epigastric reflex could hardly be elicited, and seemed to be deficient in about the same proportion as the impairment in common sensation. There was a history of syphilis and salivation thirteen years prior. The diagnosis made was sclerosis of the posterior columns extending from the second dorsal to the eighth dorsal. One year later and the arms were showing ataxic symptoms. During this period there was no loss of knee-jerk. It was two years later still before this began to disappear. The case then became a very typical one. Here, then, was a case beginning in the mid-dorsal region, and slowly but steadily ascending to the roots of the brachial plexus; and still more slowly, or better, much later, making a start in the lower dorsal and upper lumbar regions. It was thus nearly three years from diagnosis of the disease in the mid-dorsal region, till the date at which the knee-reflex became weakened.

In the next case I shall refer to the first symptoms were pins and needles and loss of proper feeling around the anus. From this want of acuteness in feeling the retention of the fæces became faulty. The plantar reflex was soon lost and sensation from the plantar region travelled slowly. Twice there were lightning pains in the legs. In the areas supplied by the sacral nerves there was formication. The patient felt as if walking on very thick felt, and could move about only with much difficulty in the dark. All the while that these symptoms existed the knee-jerk was active. In six months from the date of first seeing the patient the knee and cremaster reflexes began gradually to fail. From this date the case presented no difficulties as to diagnosis.

That the cerebral control is very important in the regulation of the knee-jerk the following case amply proves. The patient, a child three years of age, fell from the table and injured her head. There were continued right side convulsions for two days, when the patient died. The necropsy showed that there was a large blood-clot on the left parietal region of the brain. The knee-jerk on the left side was not affected, while that on the right side was greatly exaggerated. This could only have been due to lost cerebral control, due to the cortical pressure from the clot. The respiration was full and cyanosis did not occur. This positive case is worth a great many negative ones.

In my former paper I mentioned the condition of the knee-jerk in some cases of poisoning by coal-gas. Since that date I have had a good opportunity of studying the same condition. One patient was a young woman about twenty-five years of age, the other a girl of thirteen years of age. The elder one had neuralgia in her face and got up to rub on some liniment for the relief of the pain. She did not turn off the gas properly. In the

morning the family found them in their room in a suffocated condition. The younger was not so bad as the elder. The latter was in a very dangerous condition. The knee-jerk, in the younger one, was exaggerated; in the elder, absent, but returned gradually as she recovered. The narcosis in the first case was sufficient to arrest the cerebral control, but not the influx from lower centres. In the second, the lower as well as the higher centres were in abeyance. As she began to recover, the knee-jerk returned. Artificial respiration was necessary for at least an hour.

J. Hughlings Jackson has called attention to the condition of the knee-jerk in the state of supervenosity. Dr. Risien Russell has made some experiments on this question. But experiments on dogs are not as satisfactory as the experiment of disease on the human subject. In one of my patients, a gentleman of seventy-eight years, who died of bronchitis and asthma, with, of course, extensive emphysema, the knee-jerks gradually disappeared, and finally could not be detected by the most careful search. There were no convulsions to exhaust the lumbar nuclei according to Gowers's suggestion. In another case of a child, a boy five years of age, with severe whooping-cough, I found the knee-jerk generally absent, or much reduced, after coughing spasms, when there would be extreme cyanosis. My opportunities for observation in this case were unusually good. As the patient resided at a distance of sixty miles from my office, I took the evening train out and stayed all night with him. There were no convulsions. I mention this because Dr. Risien Russell thought that the convulsions might have had something to do with the loss of the knee-jerk in the dogs he experimented upon, as well as the supervenosity. A great number of cases must, however, be collected before any rules can be formulated on this heading. So far it would appear that deep cyanosis causes a loss of the knee-jerk.

When we come to the study of the knee-jerk in epilepsy some serious difficulties at once loom up. Jackson has suggested that the fibres of the lateral tract may become exhausted by the convulsion, and, consequently, the cerebral control over the spinal centres is lost. In this way he accounts for the fact that the knee-jerk is exaggerated sometimes after an epileptic seizure. It is more likely that the cerebral cortex itself is exhausted after the violent discharge of nerve-energy displayed in an epileptic fit. No other factors complicating the problem, the knee-jerk would in such cases be in excess of the normal. W. R. Gowers has suggested that, after an epileptic fit, when the knee-jerk is absent, there has been an exhaustion of the lumbar nuclei. It is quite certain that exhaustion of the lumbar nuclei would cause a loss of the knee-jerk, but there is no means of proving that such exists. In an epileptic fit the discharge is cerebral; the lumbar nuclei may act as transmitters of the nerve-energy, and not as producers of it. It is likely, therefore, that the view of Gowers is not correct. In the case of post-epileptic paralysis there is every reason to believe that the loss of power is due to cerebral, and not to spinal, exhaustion. In a case of typical Jacksonian epilepsy under my care, affecting the right leg, there was post-epileptic paralysis of the right leg after a fit, indicating loss of cerebral power for that leg; and exaggeration of the knee-jerk on the same side, indicating lost cerebral inhibition over the cord. This is just what we would expect in a paralysis of cerebral origin.

A short time ago I had an opportunity of studying the knee-jerk in a young man after an epileptic fit. When I saw him the convulsive movements had just ceased; but he was in deep coma. I tested the knee-jerk, and found it absent, nor was there any rectus or ankle reaction. In an hour later, as the coma was beginning to pass off, the knee-jerk began to return By the end of two hours it was exaggerated, and the day following was again normal. My own analysis of this case is that, during the deep coma after the fit, the lower as well as the higher centres were inactive, whether from supervenosity or not, I am not fully prepared to say. In a short time the lower centres regained their tone, while the cerebrum was still inactive. In this condition of the nerve-mechanism, the jerk was over-active. A little later, the cerebrum also regained its energy and exerted its inhibitory control, and reduced the knee-jerk to the normal.

In a case of status epilepticus which I watched for an entire night, and witnessed twelve convulsions during my stay, I made repeated tests of the patellar reflex. I have already referred to this case in my paper on epilepsy, read before the Huron Medical Association. The fits were severe and the post-convulsive coma deep. After every attack the knee-jerk was invariably absent, but partially or completely returned before the next seizure. A hypodermic injection of morphia was given which controlled the fits. Next day, when the patient awoke, the knee-jerk was exaggerated on both sides, and continued so for three days, gradually returning to the normal. At the time of each paroxysm, there was distinct cyanosis.

From my observations I would conclude: 1. That when the knee-jerk is exaggerated after an epileptic fit this condition is due to an exhausted state of cerebrum, by which its power to inhibit is weakened or lost. 2. That we are not justified in adopting Gowers's view, that the absence of the jerk after an epileptic fit is caused by an exhausted state of the lumbar nuclei. The spinal centres do not originate any of the energy displayed during a fit, and consequently would not likely become exhausted. 3. I think that the loss of the knee-jerk, after some attacks of epilepsy, must be due to some blood condition which acts on the lower centres, cerebellar and spinal, causing their inactivity till the blood condition passes off. Whether this blood condition is one of supervenosity, as suggested by Hughlings Jackson, or not, is at present impossible to say. In some instances, I think it is. 4. The experiments of Franck, Pitres, Gotch, Schäfer, Horsley, Rosenberg, and others, which I have been able to corroborate, show that the motor disturbance in idiopathic epilepsy originates in the cerebral cortex, no matter how this may be incited to activity.

The knee-tendon reaction in sleep has received but little attention. In deep sleep the reflexes are greatly diminished or abolished. In the primary condition of sleep, or when sleep is just invading the system, the knee-jerk is increased. In a large number of instances I have found this to be the case. It would seem that in sleep the highest centres begin to succumb first to the influence, and the cerebral control is lost early. In this way the knee-jerk is increased at first, and later on, when the sleep becomes deep, the reflex is lost, by all the centres of action becoming dormant and inactive.

In a case of primary lateral sclerosis, where the knee-jerk is very active when the patient is awake, I have found it disappear entirely in very deep sleep. On the other hand, in a case of tabes dorsalis I have found a slight reaction as the patient was just going to sleep, when there was none when awake or fully asleep.

In the cases, so far, that I have had an opportunity of applying the tests, the knee-jerk has been increased during the first stage of chloroform narcosis. When the narcosis is complete, the tendon-reaction is lost. The cerebrum is the first portion of the nervous system to yield under the influence of the chloroform, and loses its inhibitory or controlling power just as I have shown to occur in the early stage of alcoholism.

What root governs the knee-jerk? This is an important question. In the *British Medical Journal*, March 12, 1892, C. S. Sherrington has a very valuable note toward the localization of the knee-jerk. In this note he shows that the section of either the anterior or posterior root of the fifth lumbar nerve in the rhesus, destroys the knee-jerk. In the case of a man, however, most authors give the second, third, and fourth lumbar nerves as those connected with the knee-jerk. I shall mention here a case that I have referred to elsewhere. More than fifteen years prior to the death of the patient he was stabbed in the back in the lumber woods of Michigan, during a drunken brawl among the shanty men. His

wound healed up and there was no more about the matter. The only features of note were the loss of the knee-jerk on the left side, the side of the stab, and marked atrophy of the vastus internus and crureus. It would seem from this case that the knee-jerk depends upon these two portions of the quadriceps. The examination of the cord revealed the important fact that the fourth lumbar root was destroyed. The roots above and below this appeared to be perfectly healthy in every way. This case would locate the knee-jerk in the fourth lumbar nerve, and in the vastus internus and crureus muscles. One case is not enough to fully demonstrate the exact limits of the centre and nerves governing the reflex; yet, so far as it goes, it is a valuable case toward such an end. In my case there was no atrophy of the rectus, and still the reflex was absent. One would conclude from this that the rectus is not the muscle for the knee-jerk.

Another disease or condition, in which a careful study of the knee-jerk may yield important information, is Landry's paralysis. In three cases of this nature, all supposed to be true Landry's paralysis, the knee-jerk was present in one and absent in two. In the two where no trace of the reflex could be obtained, the cases ultimately progressed as a polyneuritis and got well. In the third case the reflex was never lost and yet the case progressed steadily to a fatal ending. Much attention will have to be given to this subject before any definite laws can be laid down. My own belief is that when the knee-jerk is lost, however close the symptoms may resemble acute ascending paralysis, the case partakes mainly of the nature of a neuritis, and the prognosis, to this extent, is all the better. On the other hand, when the symptoms are those of Landry's disease, and the knee-jerk retained, or even exaggerated, it is decidedly more likely that this is the true condition than that of a multiple neuritis. In the above two cases there was also muscular atrophy, but in the third there was no atrophy. For these reasons I gave a very unfavorable opinion of the case.

Progress of Medical Science.

The Treatment of Vesical Calculus in Women.—At the Société Médico-Chirurgicale, M. Desnos read a paper on the treatment of vesical calculus in woman. Three methods are employed to-day in the treatment of vesical calculus in the female—dilatation of the urethra, lithotrity, and lithotomy, vesico-vaginal or hypogastric. Forced dilatation of the urethra counts many partisans, and one of the reasons in favor of it is the apparent facility of its execution. The manœuvres which it necessitates are delicate enough, but very few deaths have been put down to its account. There is one inconvenience, however, resulting from it against which the surgeon is almost always powerless—incontinence of urine. The operation is practised, as everyone knows, by dilators, either that of Guyon, Dolbeau, or the sound of Hegar, constructed for dilatation of the uterus. Two lateral incisions are made in the meatus and the instrument is introduced, the dilatation being effected with great care in order to avoid ruptures. When fully dilated the finger is pressed slowly in and with great gentleness and the position of the calculus well ascertained as well as its size. The crushing is generally easy, and when the fragments have been all washed out and the bladder irrigated with an antiseptic solution, the patient may be considered definitely relieved. Sometimes the incontinence lasts only a few hours, while at others days and months, and very frequently forever. It is not the result of any special kind of instrument, nor either of the amount of dilatation, but of the constitution of the patient and the age. In young women he has seen incontinence gradually disappear, whereas after fifty years of age the infirmity becomes permanent, and that is the principal reason why he renounced, completely, lithotrity in women past middle life. Vesico-vaginal or hypogastric lithotomy is in general easy to perform; the incision should be exactly in the median line and not too close to the urethra, as reunion is more difficult at this point. Immediate suture should be practised, but the mucosa of the bladder should not be comprised in the ligature. The hypogastric incision should be reserved for voluminous calculi, except in the case of virgins. M. Reliquet said that when dilatation of the urethra was made under chloroform the meatus should be freed all round by incisions into the fibrous attachments. Since 1871 he has employed this method, and he has frequently seen the bladder resume its tonicity, especially when the patient is of a robust constitution. M. Potherat thought that lithotrity was the operation to be chosen in calculus of the female, unless the foreign body were too voluminous. The position of the uterus is of importance, as the stone is always found on the opposite side.—*Medical Press.*

The Child's Cry as an Aid to Diagnosis.—The cry of children, according to Dr. Hill (*Denver Medical Times*), in pneumonia and capillary bronchitis, is moderate and peevish and muffled, as if a door were shut between child and hearer. The cry of croup is hoarse, brassy, and metallic, with a crowing inspiration. That of cerebral disease, particularly hydrocephalus, is short, sharp, shrill, and solitary. Marasmus and tubercular peritonitis are manifested by moaning and wailing. Obstinate, passionate, and long-continued crying tells of earache, thirst, hunger, original meanness, or the pricking of a pin. The pleuritic is louder and shriller than the pneumonic, and is evoked by moving the child or on coughing. The cry of intestinal ailments is often accompanied by wriggling and writhing before defecation. Exhaustion is manifested with a whine. Crying only, or just after coughing, indicates pain caused by the act. The return or inspiratory part of the cry grows weaker toward the fatal end of all diseases, and the absence of crying during disease is often of graver import than its presence, showing complete exhaustion and loss of power.

Treatment of Cystitis by Injections of Corrosive Sublimate Solution.—Dr. Guyon employs a solution of sublimate of the strength of 1 to 5,000, in the local treatment of various forms of cystitis. Its action was tested in twenty-six cases of tubercular, gonorrhœal, prostatic, and other forms of cystitis. At first 20 to 30 drops of 1 to 5,000 solution are injected into the prostatic urethra; later one may employ a solution of 1 to 1,000, and may inject the whole contents of a syringe holding some four grammes, leaving the solution in the bladder, which should be empty before injecting. The more severe the pain, the more carefully must the injections be regulated as to quantity. In tubercular cases the results were most encouraging. In chronic gonorrhœal cases the remedy is also valuable. Washing out the bladder proved to be of much less value. When all washing was stopped, and mere injections adopted, the cases began to improve. In no instance did any accident, general or local, follow the use of the sublimate.—*Annales des Maladies des Organes Genito-Urinaires.*

The Blood in Fever.—Dr. Stein, of Vienna, has made some experiments in the hope of solving the question of the origin of the blood-changes in fever. Are they due to the rise and fall of temperature, or to the action of medicines? The results of his studies are as follows:

It has been demonstrated that the consistency of the blood is increased during fever and diminished during defervescence. After the use of antipyretics, it was discovered in many cases that the consistency of the blood was diminished. The ingestion of large quantities of fluid often causes a thinning of the blood, and the discharge of large quantities of fluid (as in diarrhœa) caused a thickening of the blood.

The author also refers to experiments conducted during a period of two years on one hundred and sixty-eight persons with reference to the condition of the blood before and after defervescence, and to the condition of the blood before and after the administration of vaso-dilatory

medicines to individuals free from fever (internally antipyrine, antifebrine, subcutaneously pilocarpine). In most cases there was found a change in the consistency of the blood. Elevation of temperature was found to be accompanied by an increase of the consistency of the blood, and spontaneous decline of temperature by a diminution of consistency. Artificial reduction of temperature was usually followed by the same decline of consistency. The results of the investigation of the effects of vaso-dilatory medicines on afebrile persons were not entirely satisfactory. In most instances it was found that with the beginning of vaso-dilatation there occurred a diminution of blood consistency.—*Centralblatt für klinische Medicin.*

Treatment of Fracture of the Neck of the Femur.—in discussing Dr. Whitman's paper, Dr. A. B. Judson approved the use of the hip-splint in the treatment of fracture of the neck of the femur, and would extend the idea further, by suggesting its use in fracture of the shaft. A high sole should be worn on the well foot, and additions might be made to the upright of the splint to arrest or moderate mobility at the point of fracture. He made this suggestion with more confidence in view of the fact that union is promoted in cases of ununited fracture by putting the patient on an apparatus which permits locomotion and exposes the fragments to agitation or sufficient traumatism, and of the right kind—to promote union. It is a curious converse of the rule in obedience to which we fix an inflamed joint in order to secure ultimate mobility. In the one case we promote fixation to secure mobility, and in the other we promote motion to secure fixation.

Dietetic Treatment of Diseases of the Stomach.—Dr. Emmerich Hertzka treats at length on this subject in the *Wiener Medizinische Presse*, Nos. 25, 26, 28, and 29, 1892. After speaking of the different ways in which milk is prepared as a food, he calls attention to the practical point that milk may often be sipped or taken in teaspoonful doses by persons who otherwise cannot tolerate it. Where an absence of hydrochloric acid exists, milk will undergo fermentation as well in the stomach as in the intestine, and is therefore contra-indicated; where lactic and butyric fermentation exist the smallest quantities of milk will not be tolerated. Kumyss and kefyr, which are tolerated in numerous gastric disorders, are contra-indicated in gastric ulcer. Again, in intestinal atony, kumyss and kefyr are indicated. In severe forms of flatulence, in diseases preceded by severe diarrhœa, gastric dilatation or atony of the stomach, milk is not well borne. This applies also to progressive forms of carcinoma of the stomach. In mentioning different species of fish as dietetic remedies, the author excludes eels, sturgeon, and sardel, although the latter might be used if excessive salting could be avoided. Spicing of food should be avoided, and salt should be used for flavor only. In speaking of those cases which cannot be nourished per os, where it is desirable to allow the stomach to rest, or where only a very small quantity of nutriment can be taken into the stomach, the author details the value of enemata. Leube recommends meat pancreas enemata and emulsified white of egg. To promote absorption one gramme of common table salt is added to the yolk of one egg. The latter method is especially desirable in cases of stenosis of the œsophagus, carcinoma of the stomach, many cases of ulcus ventriculi where hemorrhage has occurred, and where it is desired to rest the stomach five to eight days in order to strengthen the whole system. In chronic recurring ulcer of the stomach, where continuous rest in bed is a necessity, and in "irritable stomach" (hyperæsthesia), the following method is useful: Clean the rectum by an enema of half a pint of water, or, better, by injecting half a pint of a salt solution, and then wait some time for the effect of the enema and the consequent evacuations. Ewald's nutrient enema is made as follows: Two or three eggs should be beaten with one tablespoonful of cold water, then add a minute quantity (enough to cover the point of a penknife) of flour; mix this with half a cup of a twenty per cent. grape-sugar solution; this latter is boiled and a wineglassful of red wine is added to it. Slowly add the egg solution, but care must be taken that the solution is not too hot, as the albumin will otherwise coagulate. The whole mixture must not be more than about half a pint. The addition of a small quantity of mace may be serviceable. Jaccoud recommends nutrient enema of 250 grammes of bouillon, 120 grammes of wine, 2 yolks of eggs, and 4 to 20 grammes of dried peptone. Boas, from whom this author copies, recommends 250 grammes of milk, 2 yolks of eggs, 1 teaspoonful of table salt, one tablespoonful of red wine, and one tablespoonful of flour. This quantity will be absorbed by the intestine. The introduction of the enema can be best accomplished by a syringe with a long, soft, detachable tube and wide openings. After introducing this quantity the patient should remain very quiet on the back or the side for a few minutes. Boas uses the Hegar funnel with a long, soft intestinal tube. Where the sphincter is weakened, he employs a rubber ball, which he introduces, empty, when the sphincter is relaxed, and after the enema has been introduced fills the ball by air or water and leaves it *in situ*, thus securing mechanical closure of the anus; where considerable irritation exists a few drops of tinct. opii can be added. Such enemata can be used one to four times in twenty-four hours. Boas recommends them in severe cases of dilatation of the stomach with fermentation, to be used for from ten to fourteen days. In this way the pain, vomiting, and gas formation are avoided by giving the stomach rest. Increase in weight is the positive proof of the absorption of this nutritious method. Intense thirst is the only symptom complained of: this may be relieved by small bits of cracked ice, or by giving very small quantities of tea or water. After this treatment has been continued for two weeks in cases of chronic recurring ulcer, it is safe to resume, cautiously, solid nourishment, *e.g.*, meat, white bread, pastries—which, however, must be carefully prepared. Where there is a tendency to flatulence large quantities of fluids must be prohibited.

The author advises rather a mild and easily assimilable diet, in those cases, in order to prevent hemorrhage, which may prove fatal. If no hemorrhage occurs it does not speak against the existence of ulcer, and he prefers subjecting those cases resembling ulcer to a mild diet rather than to overlook one single case of ulcer in which hemorrhage (probably fatal) might settle the diagnosis. The grape-cure treatment might be serviceable in abdominal plethora in anæmic girls, especially in those cases in which the anæmia is associated with habitual constipation, and after severe gallstone colic, especially in women. It is contra-indicated when hyperacidity is present.

Dystocia Due to a Cyst in the Liver of a Fœtus.—Dr. Bagot gives an account of a case in which a large cyst of the left lobe of the fœtal liver was the cause of great delay in labor. The woman had had one healthy child previously, and in this, her second labor, the head was born; but all the efforts that the students in attendance could make were insufficient to deliver the trunk. Dr. Bagot passed his hand into the uterus, and perforated the abdomen of the fœtus with Smellie's scissors. A yellow fluid poured out, and the child, a male, was then easily delivered. Only an imperfect autopsy was permitted, but save for the hepatic condition above mentioned, the viscera appeared normal. The gall-bladder was absent. The mother was apparently syphilitic.—*Dublin Journal of Medical Science.*

Overcrowded State of the Profession in Chicago.—It is really astonishing, when one stops to think, how many physicians are coming to the city to locate, and also appalling to settle the final outcome of all those who drift here, when one realizes how many are now simply hanging on and hardly keeping their heads above water.—*Medical Current.*

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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PROSPECTIVE SANITARY LEGISLATION.

A QUESTION of much professional interest was brought prominently forward in the Academy of Medicine at its special meeting last Friday evening. It was in effect this, Shall the Academy consider measures which affect the public welfare? In a meeting of one hundred and forty-four members, seventy-seven favored the proposition against sixty-seven negative votes, giving a narrow majority of but nine affirmative votes. This formidable negative vote will be a profound surprise to the public and to the profession at large, and we fear will go far to neutralize the future influence of the Academy on all questions of popular concern. Even the reinstated Quarantine Committee must be impressed with a sense of distrust, on the part of the Academy, in the propriety of its work, and consequently cannot as efficiently accomplish the object for which it was originally appointed. If this vote is a fair indication of the trend of the Academy it is apparent that a new departure in its policy is at hand. Heretofore it has been very properly recognized as a powerful factor in the creation and support of good government. In the reform which it created in our health organization and laws it justly won the gratitude of our best citizens. By its support of other measures of social and sanitary reform it has received the commendation of the public. Every President of the Academy has enforced the duty of that body to conserve measures of public utility, and citizens have in return for its good offices contributed freely to its support.

In expressing our regret at the indications of the withdrawal of the Academy from its dignified and honorable position of authority, on all public questions involving a sound medical judgment, we believe we voice the sentiment of its ablest, most judicious, and most conservative members. We have no sympathy with that sentimentalism which deprecates the active interest of the Academy in great public questions on which that body alone can give an intelligent opinion. The statement that such interest and action must interfere with its scientific work will, we believe, prove altogether untrue. On the contrary, the stimulus of the discussion of current popular topics which come within the domain of medicine has been felt throughout its membership and always gives renewed activity to the work of every section.

The attitude which so large a minority of the Academy has assumed toward the agitation for a national quarantine will, we fear, tend to influence other medical societies which have been ready to co-operate with that body. This failure of a widespread interest among medical societies in national sanitary legislation seems peculiarly unfortunate at this time when we are on the eve of a succession in the Administration at Washington which we have good reason to believe will favor a well-devised quarantine measure. And this fact is the more important in view of a probable extra session of the new Congress, which will have ample time to consider health questions, with the possible additional stimulus of an impending epidemic of cholera.

The possible failure of medical societies to move promptly and energetically for a quarantine law, at this critical juncture, as foreshadowed by the action of the Academy, imposes, we believe, an obligation upon the medical press of the country which it should not hesitate to assume. If there is united and concerted action in a common effort, the medical press, in connection with the societies, can organize and concentrate the influence of the profession more immediately and powerfully than any or all other organizations. But from our stand-point reform in the quarantine laws, the object aimed at by the Academy, is but a part, and even a minor part, of the scheme of sanitary legislation which the profession should demand of the next Congress. We must aim to secure the creation of a central public health organization worthy of the country and of the age, and qualified and empowered to deal efficiently with the great sanitary interests of our diversified climate, our world-wide commerce, and our heterogeneous population. There will doubtless be at first very different ideas as to the organization and equipment of that central body, but the free interchange of opinions through the medical journals and societies will soon bring harmony of views and concert of action. We do not now present any definite plan of organization, but intend to review some of the different schemes which have been brought forward, and hope thereby to furnish the groundwork for the construction of a public health service in the general Government which will commend itself, by its intrinsic merits, to the medical profession and to the favorable action of Congress. We therefore desire by every means in our power to encourage the Committee of the Academy to enlarge the scope of its work, and to take the most active measures toward harmonizing these different views on a common working basis.

HISTORICAL ORATIONS.

THERE is no doubt of the mental stimulation and the ethical value which come from the celebration of historic characters and great events. To us, in the hurry of our civilization, it often seems a waste of time to have jubilee addresses and annual orations upon the life and work of honored worthies of the past. But we might be the better for stopping at times to consider how our predecessors achieved their triumphs and gave to science impulses from which we now benefit. American medicine has a present and a future, but not a past; and we must be content to cross the water if we wish to celebrate the labor of previous centuries.

England seems especially destined to keep in mind the characters of the men who founded modern medicine.

Every year we hear the praises of Harvey and Hunter sung with undiminished eloquence. The tune is the same, but the instrument is always a fresh one.

Our London contemporaries are just now particularly happy over their last Hunterian oration, delivered by Mr. Thomas Bryant. The circumstances and surroundings were most impressive. The orator wore his official robes and timed his speech by an ancient watch, once owned by Hunter. Before him hung a picture of the great surgeon, painted by Reynolds, and made familiar to us by innumerable copies. Grandest of all, the Prince of Wales and his son, the Duke of York, were present and sat through the whole speech. This was a masterpiece of literary art, we are told, yet we wonder if his Highness was not for a moment bored and wished for a rattling game of baccarat. Mr. Bryant spoke of Hunter's industry as a worker, of his transcendent capacity for taking trouble, of his humility, of his career as a seeker after truth, and of his work as a surgeon. His peroration deserves quotation, and perhaps by it some of our readers may get that "incentive to continued good work" which is the teaching of Hunter's life.

Mr. Bryant says: "With these references to Hunter as a geologist, biologist, physiologist, pathologist, and surgeon, I must bring my lecture to a close, and in doing so express a hope that we may continue in all gratitude to be inspired with the memory of John Hunter, and, as heretofore, periodically raise our voices in his honor, although it may be said with truth that in the works of all who have followed his footsteps and studied in his spirit, he yet speaketh. Let this Royal College of Surgeons of England, which placed a tablet over the grave of John Hunter in Westminster Abbey, continue to repeat the record there engraved, of their admiration of his genius as a gifted interpreter of the divine power and wisdom that works in the laws of organic life, and their grateful veneration for services to mankind as the father of scientific surgery. The harvest which has already been reaped from the good seed which was sown by Hunter has been unrivalled, and the seed must be as fruitful in the future as in the past, if the fields are rightly tilled by his followers. Should, however, the seed be choked or hidden for a time by weeds which have been sown by either the promoters of a passing fashion, the advocates of some taking and possibly erroneous theory, or of rank empiricism, Hunter's seed, if rightly nurtured, like mummy seeds when watered, will spring up with renewed vigor, to enlighten those who seek light; for it possesses a germinal principle of life which guarantees vitality."

A PROSPECTIVE GREAT MEDICAL COLLEGE.

Regarding the proposed union of the Chicago medical schools with the Chicago University, the Dean of the University, Dr. Goodspeed, says:

"The University is not prepared to take charge of the matter, on account of lack of sufficient funds for the endowment of such an addition. An effort is being made to interest men of large means in the undertaking, and there is every indication of final success. The University would like a medical school distinctively of the highest grade, greater than any now in America. This would make Chicago the centre of the highest medical learning in this country. The University is more disposed to unite with medical colleges now in existence than to develop an independent one. The purpose would be to elevate the standard, endow the department liberally, and make one powerful high-grade medical school. Medical education should be endowed if a high standard is to be attained."

The people of Chicago are evidently very much in earnest, and it is altogether probable that before long the proposed unification of the schools will take place. An institution will then surely result which will be a credit to the country, and one which will be a formidable rival to Eastern colleges. It behooves those interested in our New York schools to be on the alert. Two of them at least are much in need of a further endowment, and the millionaires of this city could not spend their money to better purpose than in helping them. New Yorkers sadly lack the public spirit which has given such an impetus to many Western cities. The writer of a recent article in one of our monthly reviews shows that no large city in the country has received so little in the way of gifts from its wealthy men. We have two colleges here, one of them over a hundred years old, yet both together are far poorer than the Chicago University, which has hardly reached organized existence.

THE PAN-AMERICAN MEDICAL CONGRESS.

As has been previously announced, the first All-American Medical Congress will be held in Washington during the first week in September next. This is possibly a little early for a Washington meeting, as it is apt to be pretty warm there at that time; but it was impossible to select a later date on account of the meeting of the International Congress in Rome, in the latter part of the same month. As it is now, there will be sixteen days between the close of the Washington meeting and the opening of the Rome Congress, giving ample opportunity for those who desire to assist at both meetings to do so.

The work of the Congress will be distributed through twenty-two sections, a pretty large number, yet not too many, perhaps, if all departments of medicine are to be fully represented. There are two subjects especially which we hope to see thoroughly discussed, namely, tropical diseases and quarantine. As the commercial relations between the several countries of this hemisphere become more extensive the question of quarantine grows more important, and the solution of the problem of warding off infectious disease without interference with commerce becomes more and more urgent. Then, too, with increasing intercourse between the temperate and tropical regions of America, the study of tropical diseases assumes a greater interest to northern physicians. There is a strange dearth of literature on this subject in the English language, the more strange when we consider the many colonies of England within the tropics, and the opportunities her Indian medical officers, especially have had of studying these affections in natives and European residents. France cannot compare with England in the number of her colonies, yet the works of Corré, Kelsch, Kiener, Laveran, Dutroulau, Bérenger-Féraud, Treille, and others are well known, while the English student has very few modern works to which he can turn for information on tropical diseases. We hope to find many contributions of this nature offered at this Congress.

They will not all be in English, it is true, but they will be accessible and can easily be translated for English readers. As the Cuban Medical Congress, which was to have been held in October, was, for some reason of which we are ignorant, not convened, there ought to be a number of papers available which had been prepared for that meeting.

But these are not the only benefits that will flow from this gathering of American medical men, for we hope to be able to instruct as well as be instructed by our guests who may honor us with their presence at this first reunion. And not the least beneficial and pleasant feature of the Congress will be the forming of acquaintanceships, and the drawing together in closer bonds of professional and social union all the practitioners of this vast continent, for as the motto of one of our Spanish-American contemporaries has it, *Todos somos Americanos*—We are all Americans.

There is one matter connected with this first meeting to which attention has already been called, and to which it will do no harm to call attention again. It is the question of registration. This registration fee for residents of this country is $10, none being asked of the foreign members. As there is at present but little available funds to meet the necessary expense of organization, it is very desirable that those intending to take part in the Congress should register in advance. By so doing they will help the committee to meet their obligations, and will also very materially lighten their labors, which are by no means light. The committee begs all friends of the Congress to send their registration fee as soon as possible to the Treasurer, Dr. A. M. Owen, Evansville, Ind., and we can only say that such a request is most reasonable, and hope that our readers will respond in numbers, and promptly.

News of the Week.

Teucrin, a New Antiphlogistic and Antituberculous Agent.—Ever since Professor Liebreicht showed that the cantharidine compounds produce similar effects to Koch's tuberculin, various experimenters have searched for substances acting in the same manner, and there are certainly a great number of different chemical bodies which, when administered by injection into the animal organism, produce local hyperæmia around the remains of chronic inflammatory processes and the site of foreign bodies, as well as an increase of the production of lymph accompanied by so-called general symptoms—*e. g.*, tachycardia, fever, etc. Such a "lymphagogue," as it may be called from the experiments made by Professor Heidenhain, of Breslau, has now been found by Professor Mosetig, of Vienna, to exist in the plant called Teucrium scordium, one of the Labiatæ, which was officinal many years ago and which was known even to Dioscorides as possessing an antiseptic action. Mosetig used an aqueous extract prepared from the herb which he called teucrin, the dose varying up to five grammes. When injected subcutaneously in healthy or sick persons, teucrin produces a sudden rise of temperature, reaching 38.5° to 40° C., after four hours, and lasting from eight to ten hours. The fever thus produced exhibits the characters of Volkman's aseptic fever, the patients feel themselves as well as before, the appetite is increased, and the secretions and excretions are not changed. Locally there is only a slight swelling round the puncture; sometimes œdema and pain are produced, persisting for twenty-four hours in healthy persons, but in diseased tissues a very active hyperæmia is induced, lasting some days, and its effects manifest themselves by changes in the morbid tissue, and even, finally, by the total absorption of the latter. Teucrin injections were employed by Mosetig in cases of cold tuberculous abscesses. Generally three grammes of the teucrin were injected near the abscess subcutaneously. Two days after the injection the cold abscess had become a hot one, which was then treated surgically like a common phlegmon. Healing took place very rapidly. More than two hundred cases have been treated until now by this method by Mosetig. Teucrin has also been used in cases of fungous adenitis instead of curettement and has proved very successful. The injections showed a highly absorbent effect when made in the neighborhood of swollen lymph-glands. Beneficial effects of teucrin injections have also been found by Dr. Kliegl (Mosetig's assistant) in cases of actinomycosis and lupus. Mosetig believes that the injections of teucrin will prove to be very useful, especially in cases of local tuberculosis of the soft tissues, as caseous infiltrations are destroyed after the injections by the acute inflammation which follows, while more recent tuberculous infiltration may disappear by being absorbed under the influence of the hyperæmia caused by the injection.—*Lancet.*

A Batch of Jubilees.—In addition to Professor Emil du Bois-Reymond's celebration of the golden jubilee of his graduation as Doctor in Medicine, mentioned elsewhere by our Berlin correspondent, a banquet is to be given on February 17th, by the Berlin Medical Society, in honor of the fiftieth anniversary of the graduation of Professors A. Hirsch and Henoch; of Dr. Langerhans, Chairman of the Municipal Council; and of Dr. Neumann; and of the sixtieth anniversary of Dr. Reisch's taking his degree.

The Cincinnati Obstetrical Society, at its annual meeting, was very "hospitably entertained" at the private residence of Dr. T. A. Reamy. The election of officers resulted as follows: *President*, Dr. William H. Taylor; *Vice-President*, Dr. J. M. Witherow; *Secretary*, Dr. E. S. McKee.

Consolidation of Cincinnati Medical Societies.—A movement is on foot to consolidate all the medical societies of Cincinnati under one society.

Tropacocaine, or Benzoyl Pseudo-tropeine, is an alkaloid prepared from the leaves of the small-leaved coca which grows in Java. It is also made synthetical. Dr. Hugenschmidt, a Parisian dentist who has studied its effects, says that it is much less toxic than cocaine. As a local anæsthetic agent he employs the following solution: Tropacocaine, 10 centigrammes; distilled water, 2 grains 50 centigrammes; ten drops to be injected = 25 milligrammes. At least one minute must be taken up by the injection into the tissues. When this precaution is taken, the above dose employed in thirty-seven cases has never caused toxic symptoms. Such dental operations as perforation of the alveolus, removal of a sequestrum, and extraction of teeth have thus been rendered quite painless.

The hydrochlorate of tropacocaine, being a synthetic product, is much less liable to vary in its composition than the natural product. Dr. Hugenschmidt asks if the greater toxicity of cocaine remarked during the last few years is explicable on the supposition that the cocaine formerly in use was obtained from old leaves, while the more modern cocaine is extracted from fresh leaves. To resume, the advantages claimed for tropacocaine over cocaine as a local anæsthetic are: there is lesser toxicity at equivalent and efficient doses; the production of local anæsthesia is more marked and more rapid; and a solution of tropacocaine keeps well for months, while a solution of cocaine at the end of four or five days tends to decompose and to lose its analgesic properties.—*Lancet.*

An Eccentric Physician.—There has recently died, at Llantrissant, Dr. William Price, a member of the Royal College of Surgeons, at the age of ninety-two. His eccentricities for many years have been well known in Wales. He called himself the Arch-Druid of Wales, and would wear a whole fox-skin on his head, light green trousers trimmed with scarlet at the bottom and scalloped, a scarlet waistcoat, and a light cloak. One of his children he named Jesus Christ, and another one who died he cremated on the top of a hill. He was prosecuted in court for this latter action, but was acquitted, and apparently as an act of revenge, cremated all his dead cattle in the same public place. He has left strict orders in his will that his body should be cremated on this same hill.—*Boston Medical and Surgical Journal.*

The Revival of Symphysiotomy.—Professor Pinard publishes in *The Lancet* a clinical lecture on symphysiotomy in which he records thirteen cases of this operation, performed either by himself or by his assistants in the Clinique Baudelocque, during the year 1892. It is only necessary to mention the results obtained in this series of cases for it to be at once evident that the lecture is one of great interest and importance, especially to those concerned in the practice of operative midwifery. All the thirteen patients who underwent the operation recovered completely, and ten of the children were born alive, and were known to be thriving at the time when the lecture was given. In no case was the mother's power of walking impaired by the operation.

Removal of the Chambers Street Hospital.—The Society of the New York Hospital has decided to remove the Chambers Street Hospital to Jay Street, between Hudson Street and Staple. The new site fronts ninety-nine feet on Jay Street, and runs back on Staple and Hudson sixty-one feet. The present hospital building on Chambers Street is unequal to the demands upon it. The sale of the Bloomingdale Asylum property enables the governors to purchase the new site and erect on it a well-equipped building. The present hospital building on Chambers Street belongs to the city, and up to 1877, when it was leased to the Society of the New York Hospital, was used as a station house.

The Rhode Island Medical Monthly is a new journal, edited by Dr. J. F. Haller, and published at Providence.

Mr. Gladstone's Speech a Physical Effort.—We must, says *The Lancet*, leave to politicians the appraisement of Mr. Gladstone's speech on Monday, regarded as a piece of statesmanship, but regarded from a medical or physiological point of view, there can be no difference of opinion. The performance must be regarded, and must remain, not only as historical, but probably as unique in the history of eloquence and of States. Those who were privileged to be among the audience will never forget the scene or the speaker. In the crowded chamber, filled with all that was distinguished and influential in British society, his voice was heard for the first hour of the speech with perfect ease; and even when its physical force began to abate it was still felt as an influence altogether exquisite and refined. No difference of opinion could avail to save the listener from the spell of a voice, always seconded by the choicest amenity of expression, which it may safely be said has no rival in contemporaneous parliaments. The wonder of all this is doubled by the fact that the speaker is in his eighty-fourth year. Though there was a perceptible falling off in the force and volume of voice as the second hour was reached, the animation of the orator was all intact. The most marvellous part of all was to see the orator, after he had resumed his seat, looking as serene as if nothing unusual had been done, and to learn that he went home to dine quietly with his family and to sleep, with as little disturbance as if he had only been engaged in the most ordinary occupation.

The Gross Medical College Bulletin, issued at Denver, Col., is another new medical monthly.

The Society of the Alumni of Charity Hospital, New York, gave its third annual dinner at Clark's restaurant, on Wednesday evening, March 1st. The President of the Society, Dr. Walter Lester Carr, presided, and, after giving the address of welcome, acted as toastmaster. The respondents to the regular toasts were Drs. D. Bryson Delavan, James E. Kelly, D. B. St. John Roosa, and W. K. Simpson. Responses on call were also made by Drs. George F. Shrady, R. W. Taylor, L. Bolton Bangs, George B. Fowler, H. C. Coe, F. R. Sturgis, and Clarence C. Rice.

The Woman's Medical Journal is the title of a new monthly journal devoted to the interests of Women Physicians. It is edited by Dr. E. M. Roys-Gavitt, and published at Toledo, O. The editorial salute begins with the following tale: "There is an early Christian legend that says that when one of the saints applied for a home in a monastery, that the prior refused him entrance on the plea that the monastery was already filled, and there was no room for another novice. Undeterred by this announcement, the pilgrim took a glass of water which was well filled, and in reply placed a rose leaf in it without spilling a drop. It is needless to say he was admitted. This story is not without its moral. They may say, and say truly, that the field of medical journalism is well filled, and that there is no room for another journal. We beg to present ourselves, even as the pilgrim to the monastery, with the rose-leaf in our hands." We wish success to the modest rose-leaf.

Physicians as Trustees to Hospitals.—One of the most extraordinary perversions of justice and good sense is that which leads hospital authorities to exclude medical men from membership on the board of trustees. We are informed that there is a bill before the Ohio Legislature, whose purpose is the reorganization of the Board of

Trustees of the Cincinnati Hospital. It contemplates a board of five, four to be appointed by the mayor, and the fifth member to be the mayor himself. The mayor is already a member of the board, and is usually conspicuous by his absence from the meetings of this body. But the most peculiar feature of this bill is that it excludes physicians from acting as trustees.

An Ohio Physician proposes a law for the abolition of kissing, as being an unsanitary thing and a menace to health.

A Medical Club Building is proposed for Detroit. There are 5 medical societies and 441 physicians in that city. It is proposed that they unite and get a building for common scientific and social purposes.

Sanitary "English as she is Wrote."—The following "elegant extract" from an ordinance as to infectious diseases is an example of "English as she is wrote" in the Health Office of Detroit: "Every physician having a small-pox, varioloid, typhus fever, Asiatic cholera, glanders, erysipelas, diphtheria, scarlet fever patient, or any other disease dangerous to the public health, during each and every visit shall exercise all the precautions known to the profession." We should imagine that the first precaution necessary under such distressful circumstances would be for the afflicted physician to notify himself to the proper authorities, who will thereupon invite him to "isolate" himself. The situation recalls the case of Pope Honorius, who, having been adjudged guilty of heresy, was approached by a deputation of the council which condemned him with the humble petition, *Sancte Pater, iudica te cremari*. In Detroit let us hope it is only some minor articles of his apparel that the doctor will be asked to cremate.

The Venezuelan Government has accepted the invitation to send delegates to the Pan-American Medical Congress.

New York has still Another Hospital. It is called the Lebanon Hospital. It is situated on Westchester Avenue and 150th Street.

Obituary.

HENRY HUNGERFORD, M.D.,

NEW YORK.

Dr. Hungerford, of Stamford, Conn., died in this city February 3, 1893, at the age of thirty-six, from pneumonia, which developed while he was seriously depreciated by severe and unremitting professional duties.

The estimation in which Dr. Hungerford was held in the community to which he ministered is not only a grateful memory to his friends and kindred, but it is also a proud reflection to the profession which he adorned.

He combined all the elements of the modern general practitioner. Courteous, gentle, and sympathetic as a woman, he could be firm and decided in the presence of surgical or other emergencies. The late Dr. Willard Parker was wont to say that the country and village practitioner represents the best type of the doctor.

Dr. Hungerford illustrated this type admirably, for his untiring desire for improvement and his thorough equipment enabled him to undertake the most difficult surgical operations as readily and as skilfully as the treatment of a case of typhoid or diphtheria.

He graduated at the College of Phyiscians and Surgeons in 1880, among the honor men, and served a term on the house staff of Bellevue Hospital. He was a member of the Connecticut State Medical Society, the New York Academy of Medicine and Obstetrical Society, and Surgeon-General of the State of Connecticut from 1889 to 1892. His widow is the daughter of Mr. Walter M. Smith, of Stamford.

Such a man may be held up as an example to the rising generation of physicians.

W. W. DAWSON, M.D.,

CINCINNATI, O.

Cincinnati has been called upon to mourn the loss of two of her most worthy citizens on the same day and within a few hours of each other, Drs. Dawson and Davis.

Dr. William W. Dawson was born in Virginia, December 19, 1828. His father removed to near Xenia, O., when the doctor was but two years old. He graduated in the Medical College of Ohio in 1850. From 1860 to 1864 he was Professor of Anatomy in the Medical College of Ohio, and from 1864 to 1870 lectured on clinical surgery in the Cincinnati Hospital. In 1870 the doctor was elected to fill the chair of Surgery in the Medical College of Ohio, vacated by the late Dr. Blackman. This chair he filled with distinction till 1887, when, on account of failing health, he resigned, when the chair of Clinical Surgery was made for him, and he continued Professor of Clinical Surgery, lecturing at the Good Samaritan Hospital till disabled for service one year before his death. Dr. Dawson was for several years Dean of the Faculty of the Medical College of Ohio. The greater part of his illness he spent in the Good Samaritan Hospital, where he had served as surgeon since 1871, and where he had relieved many a poor sufferer by that art which failed to relieve him. Dr. Dawson served as President of the Cincinnati Academy of Medicine, Ohio State Medical Society, and of the American Medical Association, elected at the Cincinnati meeting and serving at the Newport meeting. Dr. Dawson waited for many years for patients in Cincinnati, but patients have also for many years waited for him. His offices have been crowded with the sick of this and surrounding cities. He was much interested in the welfare of the Cincinnati University and the S. P. C. A. work. He died without family, having had no children and his wife having died some years before.

WILLIAM B. DAVIS, M.D.,

CINCINNATI, O.

Dr. William B. Davis was born in Cincinnati, July 2, 1832. He graduated from the Miami and Ohio Medical Colleges of that city. He served two years as surgeon of the One Hundred and Thirty-seventh Ohio Volunteer Infantry during the war. For fifteen years he was Professor of Materia Medica and Therapeutics in the Miami Medical College. Dr. Davis was for a number of years trustee of the Cincinnati Hospital, member of the local State and National Medical Societies, one of the founders of the Public Library and one of the first directors of the University, also one of the prime movers and for many years chief medical examiner of the Union Central Life Insurance Company of Cincinnati. He leaves a wife and two sons, Dr. Clark W. Davis and Mr. William L. Davis, both of Cincinnati.

A Grocer in London has been fined for selling chlorodyne, on the ground that it is a poison. Some of our great retail stores might take warning by this example.

Death of Dr. Kraus.—Former Medical Director Kraus, of Hamburg, who was driven out of office during the epidemic of cholera by complaints that his negligence was responsible for the spread of the plague, has died suddenly. It is suspected that he committed suicide.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Called Meeting, February 24, 1893.

D. B. St. John Roosa, M.D., President, in the Chair.

National Quarantine Committee.—The meeting was called to reconsider the action taken at the last regular meeting in discharging the Committee on National Quarantine. The call for a special meeting, signed by ten members, was read. Dr. A. Jacobi arose on a question of privilege, and said that it was a mistake when at the last meeting, in his absence, he was represented, being one of the committee, as requesting its discharge after the acceptance of the report. That was a personal matter between himself and Dr. Loomis, who had made the motion, about which they had since had an understanding. The whole matter had been based on a misapprehension. There were several reasons why he would not, and did not, wish the committee discharged, although at the time that Dr. Loomis had talked with him he knew not the contents of the proposed report, for he had not been present at the committee's last meeting. The National Quarantine Committee had put itself in communication with other similar committees established at its suggestion in different cities, which, doubtless, looked to this one for guidance, and it was quite improper for the Academy to legislate it out of existence at this time. Dr. Jacobi said it was a great honor to be upon such a committee, it was true, but at the same time it involved a great responsibility.

Dr. J. West Roosevelt explained why he was one of the signers of the called meeting. When the committee was discharged there were but few members of the Academy present. While some of those present felt that a discourtesy had been done the committee, still the full appreciation of the step taken was only realized afterward, and one of the dailies the following morning spoke of the action of the Academy as a rebuke to its committee. No person disliked politics in medical bodies more than he, and it was to be hoped that such would not prevent the repair of the apparent discourtesy which had been shown the Committee on National Quarantine. He therefore moved that the President be directed to reappoint the committee known as the National Quarantine Committee, filling such vacancies as might be caused by resignations, and the committee be directed to continue such measures as it might already have adopted, and to take such further steps as in its judgment would tend to the establishment of a satisfactory system of National Quarantine.

Dr. H. Holbrook Curtis spoke in favor of continuing the committee, whose responsibilities, he said, were most terrific. So far as the members of the committee themselves were concerned, he supposed they would willingly be relieved of the duties placed upon them, but considering the manner in which they had been discharged, he supposed their feelings must be something like those of the boy who, when kicked down-stairs, said he didn't mind the fall only for the suddenness of it.

Dr. Alfred L. Loomis said he was opposed to the reconsideration of the motion passed at the last meeting, accepting the report of the Quarantine Committee and discharging the committee, for the following reasons: 1. The committee had done the work for which it was created, namely, to go to Washington and oppose a bill pending in the Senate, and to influence legislation in favor of National Quarantine. It was also to appeal to other medical bodies throughout the country to take action in the same line. These bodies had so acted, and their reports were incorporated with those of this committee. If these bodies had further communications to make, the Academy could receive them. The bill which they were to oppose on going to Washington had already passed Congress and gone to the President. 2. The other matters which the committee had referred to in their report should have been brought up in the Section on Public Health or sent to the Advisory Committee of the Board of Health which had been appointed by the Academy. 3. In his opinion, if the profession of the city wished to influence legislation, either in Washington, Albany, or in the city, it should act through the County Medical Society, which really was a State and legal body. The Academy had always been, at least until the last few weeks, purely a scientific body, and if it wished to preserve its usefulness it would have to remain such. Here was no place for discussions or rankerings of a political nature. It was only because it had kept itself free from such things that it had come to command such high respect from, and to exert so great influence on, the public. During his term of office it had been attempted several times to bring in questions not properly within the scope of a scientific body, which he foresaw would create discord and injure the Academy, and he therefore had persistently turned a deaf ear to them.

Dr. Loomis said a personal matter between himself and Dr. Jacobi had already been explained by the latter. He was in Dr. Jacobi's office on another business, and the question of the report of the committee coming up, Dr. Jacobi said in reply to the question what it was best to do with the committee, that he thought it had done its work, the report ought to be received, and they ought to be discharged. As it had since appeared that Dr. Jacobi was not in sympathy with the motion to discharge the committee, the speaker regretted very much having made the motion in his name, for it was not at all necessary.

In conclusion, Dr. Loomis made an earnest appeal that the doings of the Academy be not such as to drag it into the newspapers; that its work be continued of a scientific nature, and if at any time it had anything to communicate to the public, let it be done in a dignified way.

Dr. R. H. Derby said that when he received notice of the called meeting, it was his first instinct to remain away, as he had been a member of the discharged committee; and still less had it been his intention to make any remarks; but as Dr. Loomis had spoken so earnestly on this occasion against the Academy taking a certain course, he wished to quote from a speech by the same gentleman, made before an audience at Chickering Hall in 1881. In that speech Dr. Loomis eloquently pictured the dangers of dirty streets in promoting a threatened epidemic of typhus fever, etc.

Dr. M. H. Henry spoke against the Academy taking any steps savoring of politics.

Dr. Armstrong rose to correct a statement that the Section on Public Health had done nothing. He referred to its timely discussions of subjects relating to the public health, but he was not surprised at the committee's ignorance of these facts, since, although invited with all others to participate in the meetings, not half a dozen of them had been present for several years.

Dr. Sturgis queried whether it would not be wise to make this committee also a cholera committee.

The President said some members had expressed such a view, while others were opposed to it.

Dr. E. G. Janeway said that when the committee was discharged but few members of the Academy were present, and had the members of the committee themselves set aside feelings of delicacy and voted, the motion to discharge would undoubtedly not have prevailed.

The motion to reappoint the committee was then put and carried, 77 in favor, 67 opposed.

The President said, with regard to the policy of the Academy, that it was his intention to continue in the course outlined in his inaugural address.[1]

SECTION ON SURGERY.

Stated Meeting, February 13, 1893.

Joseph D. Bryant, M.D., Chairman.

The evening was devoted to the presentation of clinical cases and specimens.

A Case of Resection of the Intestine.—Dr. John A. Wyeth presented a young man on whom he had per-

[1] See Medical Record, January 21, 1893.

formed resection of the intestine for obstruction found to be due to a mass of lumbricoid worms. The symptoms of obstruction had continued five days when he was brought to the hospital, in what seemed to be a moribund condition, with regurgitant vomiting, etc. Dr. Wyeth said he had no idea of the cause of obstruction until he cut down upon the intestine in the right iliac region, choosing this location only because it was the usual site of trouble.

He sewed the peritoneal coat to the abdominal wound and opened the presenting intestine, whereupon the overdistention was relieved and soft fæces escaped. The next day masses of dead worms began to drift out. The fecal fistula was left open two months, and as it did not then heal he started to do Treve's operation for closure, but finding the intestine adjoining the opening much narrowed, he resected it, taking away four inches. Schede-Lembert sutures were used, reinforced at one point by the Halsted quilt suture. A large quantity of semi-solid fecal matter could be felt below, and fearing that when afterward this should become loosened it would cause great strain on the united gut, he concluded not to drop this, but to bring it into the abdominal wound for a time, and keep it walled about by iodoform gauze, which would prevent contamination of the general cavity should some of the sutures give way. When, after forty-eight hours, isolation of the sutured part had become absolute, he began irrigation of the rectum and colon with sweet oil and warm water to break up the fecal impaction. On the ninth day one suture of the intestine broke, and fecal matter welled up into the abdominal wound, but as it had been isolated from the general cavity no serious result followed and union was soon effected. Had the sutured gut been dropped, of course this subsequent leakage would have proved fatal. He thought the safeguard applied in this case should be adopted in all doubtful cases, especially by inexperienced operators. There would be danger of ventral hernia at the cicatrix in the abdominal wall, but this could be guarded against by wearing a pad, and was a much safer risk than to have fæces extravasate into the peritoneal cavity.

Resection of the Hip-joint for Old Dislocation.—Dr. F. Kammerer presented the following case: A man aged thirty-two was injured by being caught in a machine on March 17, 1892. He sustained a compound fracture of the right leg and a backward dislocation of the right hip-joint upon the ileum. He was admitted to the German Hospital in June with excellent union of the fracture, but with the dislocation still unreduced. The patient was narcotized on June 16th, just thirteen weeks after the accident. Prolonged attempts were made to reduce the dislocation, but to no purpose. An incision was therefore made according to Langenbeck, with a view to reposition with or without resection. It was slightly curved with upward convexity, about six inches long, and running over the head, neck, and great trochanter. After division of the muscular tissues the head, neck, and great trochanter were freely exposed. Again an attempt was made to effect reduction, but it again utterly failed. It was then seen that a most perfect new socket had been formed for the head of the femur, immediately above and behind the old acetabulum, about half an inch deep, and exactly enveloping the head of the femur, but separated from the acetabulum by a high ridge, over which it was impossible to move the head back into its original place, even after exposure of the upper end of the femur had been carried as far as it seemed warrantable. To facilitate external rotation the ligament and other soft parts, which appeared to be in a state of contraction, were divided transversely. Still reduction was impossible: when the head and neck were forced into the incision the acetabulum was only fairly well exposed: its cavity had almost entirely disappeared, being occupied by a hard fibrous mass, which was removed with some difficulty. Seeing the utter impossibility of forcing the head into the original cavity, I resected the former, leaving as much of the neck as I could to fit very snugly into the acetabulum, after having passed it over the ridge between the old and new joint cavities. When this was done the thigh stood at about a right angle to the pelvis, and the entire limb could be forced into slight external rotation. The wound was closed and a drainage-tube inserted into its upper angle. An extension apparatus was at first applied with a few pounds only, but after several days, when primary union was assured, extension and counter-extension were applied with ten to fifteen pounds, more especially to counteract the tendency to inversion and adduction. Thus the patient was kept for about two months. Then he was allowed to get up and walk with crutches, which he very soon discarded. Now, about eight months after resection, he walks with one stick over long distances. There is about one and a half inch of shortening, for which the patient wears a high sole and heel. The shortening is due to resection of the head of the femur, and not to a moving upward of the decapitated neck from the acetabulum, there being no laxity discoverable in the new joint. The tendency to adduction and inversion is somewhat more marked than immediately after operation. Flexion and extension are possible to the extent of about 45 degrees; abduction and adduction to about 20 degrees. After the dislocation has been unreduced for so long a time, it is improbable that reduction can be effected without resection, unless denudation of the bone be carried so far as to endanger its vitality. Whether it is wise to resect only the head, or the head and neck below the trochanter, does not appear from the reported cases.

A Case Illustrating Busch's Modification of the Indian Method of Rhinoplasty.—Dr. Willy Meyer presented the patient, a woman over sixty years of age, upon whom he had operated three years and a half ago, for epithelioma of the nose. By the unmodified Indian method, in order to obtain a flap from the forehead to cover the nose, the incision had to be carried far up on the forehead, which was disfiguring and more likely to result in wrinkling of the forehead; then the shorter incision turned outward and stopped at the brow, making a larger pedicle, which resulted in a puckering more disagreeable than in Busch's modification, for in the latter the incision was not carried so high on the forehead, and the pedicle was smaller, since one incision stopped on the nose, and the other was carried down to the inner canthus. The flap had been well nourished, his patient had done perfectly well and showed very little deformity. Photographs of another case were presented.

Meloplasty for Large Epithelioma of the Face.—Dr. Meyer presented a second patient, upon whom he had operated for large rodent ulcer of the right side of the face and nose, the right eye also having been involved was removed. The open surface up to the nostrils, including the right orbit, was covered over by a flap brought down from the temporal region. Immediately afterward skin-grafts had been put upon the temporal surface and had taken well, although there was a somewhat greater scar-tissue appearance than there would have been had he kept the grafted surface longer under moist dressing. It was proposed to apply an artificial nose, and to paint the integument, filling the right orbit to correspond in looks with the left normal eye, after which it was thought the cosmetic effect would be satisfactory.

The discussion on the several cases was taken up in order.

Dr. Abbe thought the Halsted quilt-suture one of the best additions which had been made to intestinal sutures, especially when used as a reinforcement to the continuous suture as a protection against leakage during peristaltic elongation of the gut. Regarding the employment of a gauze tamponade, it was true it prevented leakage into the peritoneal cavity in case a fistula formed, but in his experience it tended to cause this very accident, for the lymph exudate was not as perfect around the line of sutures when the tamponade was placed over it as when the gut was dropped into the peritoneal cavity.

Dr. B. F. Curtis had employed the tampon in two cases, but since the patients lived only a few hours after

the operation, no opinion could be formed of the value of the tampon except that it did no harm. He thought it was a wise precaution to adopt it whenever one was in doubt whether the peritoneal surfaces had been brought fully in contact around the bowel. As Dr. Kammerer had previously remarked, where the large intestine was concerned it might be regarded almost as the normal method.

The Chairman thought a question of interest was, why should retrograde peristalsis not cause expulsion of the masses of worms until after the fecal fistula had been formed; also, why the bowel below could not be cleaned out before closing the fistula as well as afterward.

Dr. Wyeth said all was done that could well be done to cause the emptying of the bowel below the fistula before this was closed, but success was met only after the continuity of the intestine had been restored, and the peristaltic wave passed without interruption. Replying to Dr. Abbe's remark, he said it should be remembered that with the use of the tamponade there was no danger if some leakage should take place, whereas by dropping the intestine such leakage would result in death. This was a point of special interest to inexperienced operators. He did not believe in the over-hand or quilt-suture in the intestine, except at isolated parts; none equalled in general the Schede-Lembert.

Dr. R. H. Sayre thought the bony thickening of the greater trochanter which had taken place in Dr. Kammerer's case was due to disturbance of the periosteum in this locality, and that it could have been prevented and as good a result been obtained without such disturbance. The formation of a new acetabulum had been well shown in a specimen in his father's collection, the old one having, from disuse, become filled with new deposit.

Dr. Royal Whitman thought the bony exudate referred to by Dr. Sayre as being present in Dr. Kammerer's case contributed much toward the successful result in preventing too free motion. He thought if the long muscles had been divided Dr. Kammerer would have found reduction after exsection of the head easier.

The Chairman had had one case of old dislocation resembling Dr. Kammerer's last fall, and he remembered the impression which he got from the literature at that time was, that reduction without excision was usually a failure; in fact, Dr. McBurney's case seemed to have been the only one approaching success, and in that instance necrosis took place, necessitating excision a year afterward. The course pursued by Dr. Kammerer gave the best results.

Dr. R. T. Morris, in discussing Dr. Meyer's case, spoke of success in making a sort of nasal septum, where the nose had lost the support of the bone and cartilage, by taking a flap from the upper lip, filling the space left by an operation similar to that for hare-lip.

Dr. Curtis had found the flap well nourished after Busch's method, and Dr. John Girdner described the case in which Dr. Sabin, a number of years ago, made an artificial nose from the patient's finger, Dr. Girdner thinking the result was sufficiently good to justify a trial of the method in Dr. Meyer's second case; but Dr. Lange expressed a contrary opinion and described a case, yet under treatment, in which he had made a nose from a forehead flap.

Congenital Club-hand with Absence of Bones.—Dr. Reginald H. Sayre presented a boy eight years of age who had deformity of the right hand resembling a club-hand, with absence of some bones of the hand and of the radius and certain muscles. There had been marked club-foot also, which had been largely corrected. The rarity of true club-hand was dwelt upon.

Dr. Royal Whitman thought cases of true club-hand without absence of bones, and cases like the one presented, were not so rare. He had seen several.

Strangulated Hernia and Pyloric Cancer.—Dr. B. F. Curtis presented specimens from a man who was brought to the hospital while suffering from strangulated inguinal hernia, accompanied by vomiting, resembling in some degree fecal intestinal obstruction. He died, and the autopsy revealed pyloric cancer which probably had been the chief cause of death, aided by strangulation of the hernia.

Sarcoma of the Tibia Mistaken for Tuberculosis.—Dr. Curtis presented the leg of a girl which he had amputated for sarcoma, the interest in the case being that at an earlier date two good surgeons had treated the case as one of bone tuberculosis.

Intestinal Paralysis Complicating Hernia in the Aged.—Dr. Fred. Lange presented specimens and related the case. The woman was more than sixty years of age, strangulated hernia had existed eighteen hours; there was tympanites, etc. Her general condition was bad, the heart acted feebly, and he expressed the opinion that although the patient, immediately after the operation, was in good condition, yet he feared it might be one of those cases in which symptoms of paralysis of the gut would develop. A little fæces and flatus passed on the second day, but symptoms of ileus developed with tympanites, which he first regarded as probably due to intestinal paralysis; but as the condition grew worse he reopened the abdomen on the third day and was surprised to find a gangrenous condition about the old strangulation. He resected the gut, made end to end anastomosis, and again at the end of the operation left the patient in good condition. Again, on the second day, a slight passage took place. On the third day symptoms of strangulation occurred, which he supposed was due to intestinal paralysis; no positive symptoms of peritonitis developed at any time, and no temperature until about the ninth day. He then reopened the abdomen and found necrosis about the intestinal sutures, with only a local peritonitis, there having apparently not been sufficient vitality to establish union by first intention. There was scarcely any rise of temperature up to the time of death, which took place from exhaustion on the eleventh day after the first operation, and three days after the last time the abdomen had been reopened.

Resection of the Gut for Cancer.—Dr. Lange presented a specimen from another case, that of a man forty-seven years of age, who had been in good health until last summer. About two months before Dr. Lange saw him he began to have attacks every few days of colicky pain and symptoms of obstruction. The symptoms pointed to chronic obstruction of the large intestine, and on physical examination a sausage-like mass could be felt in a position corresponding to the ascending colon. After protracted attempts to clear the bowel, laparotomy was performed January 17th; a hard cancerous growth was found at the iliac flexure, it was cut out, and inasmuch as soft fæces still welled up in the end of the bowel after attempts to cleanse it, he gave up the idea of doing lateral anastomosis and made circular suture. The intestine was dropped. Flatus passed, but on the third day symptoms of obstruction developed, and he made an artificial anus and passed the finger in the direction of the sutured intestine, finding all in apparently good condition. The man did well again until the third day, when hypostatic pneumonia developed which ended fatally on the seventh day, or ten days after the operation. Two days before death there developed symptoms of peritonitis, and at the autopsy two sutures were found to have given way, causing two fecal fistulæ. In another case he said he would first make an artificial anus, empty the colon, give the patient time to pick up, then exsect the diseased gut and probably make lateral anastomosis, and finally close the artificial anus. In all, he had exsected the intestine for tumor five times, and only one patient got well. In hernia one should operate, if possible, within ten or twelve hours after strangulation.

Intraperitoneal Rupture of the Bladder.—Dr. F. Kammerer demonstrated a specimen of intraperitoneal rupture of the bladder in a man aged thirty. The patient had fallen a distance of twenty feet, coming down on his feet, without striking, as he distinctly stated, any other part of his body. When he applied at the St. Francis Hos-

pital for admission, this statement seemed to receive corroboration from the fact that he had been able to go about for two days after his fall, and that careful inspection revealed no lesions, even of the slightest character, in the pubic region or any other part of the body. The accident had occurred in the country on Saturday, and he came to the hospital on Tuesday afternoon, because of the difficulty in passing water, and the increasing pains in his abdomen. When the speaker saw the patient, on Wednesday morning, he had well-developed general peritonitis, the suprapubic region was quite sensitive to touch, but also, in a less marked degree, the entire abdomen. There was distinct dulness on percussion in both lumbar regions, but none in the supra-pubic region. The bladder could not be made out from the rectum. The patient was able to pass his urine in very small quantities and frequently. It contained traces of blood, but was otherwise clear. He vomited much, and his pulse was accelerated and poor. The diagnosis was made of intra-peritoneal rupture of the bladder, but the condition of the patient seemed too serious for laparotomy. He died Thursday night. He had been urinating every half-hour or so during the last day.

The post-mortem examination showed general suppurative peritonitis. The abdominal cavity contained a large amount of sero-purulent fluid in its most dependent parts, which Dr. Brannan very kindly analyzed, and in which he found uric acid. The intestines were quite firmly adherent to each other, and at the site of the rupture to the bladder, so that the opening into the bladder was entirely closed and the intestines had to be torn away with some force to exhibit the same. No doubt there had been no further leakage into the abdominal cavity for the last day or two. The rupture itself was an inch and a half long, running in an antero-posterior direction, and situated at the highest point of the viscus. Other cases had been reported, where equally slight symptoms had immediately followed the injury, and until peritonitis set in the serious nature of the lesion had not been suspected.

Resection of the Intestine for Malignant Stricture.—Dr. J. A. Hobson, of Ohio, presented specimens with the following history:

The specimen which I present is a portion of the sigmoid flexure of the colon, removed from a patient last October, who was operated upon for pelvic trouble, and from whom was removed the tube and ovary which were the site of a large collection of pus, and which are also presented. Although the patient, who was forty years of age and had been ill for several months, was known to have had marked symptoms of stricture of the bowel, the stricture was supposed to be entirely due to adhesions. It was found at the operation, however, that a real stricture existed, and that the bowel had dropped down behind the uterus and become fastened there by inflammatory adhesions.

The adhesions were broken up and a perforation, which was thought to be the point of discharge of an old abscess, was found entering the bowel just below the point of stricture. The diseased portion of the bowel was excised, and the divided ends were united by a single row of silk sutures, which were placed in the manner which was, I believe, first described by Dr. Sutton, of Pittsburg, Pa., *i.e.*, the needle, a small curved one, is made to enter at the cut margin of the mucous surface and is carried through the different coats of the bowel, and emerges upon the peritoneal surface one-fourth inch from the cut surface; it is then entered at a corresponding point upon the peritoneal surface of the other cut end of the bowel, and emerges at a point corresponding with the point of entrance. A small opening was left into the lumen of the bowel, which was secured to the lower angle of the abdominal wound. On account of the bad condition of things in the pelvic cavity, a large amount of iodoformized gauze was packed into the different cavities. The wound was closed in the ordinary way, and the patient made a good recovery from the operation. Solid fecal discharges occurred by the natural channel on the fifth day, and the sinus left down to the bowel soon practically closed.

The patient has done well until within the last month. Now the fecal fistula has opened up again and bids fair to remain so indefinitely, and an examination per rectum and through the wound has satisfied me that the morbid process is beginning its career of redevelopment. Dr. Beech, of the New York Polyclinic, has kindly made a careful microscopic examination of the specimen for me, pronouncing it carcinoma.

The discussion on the specimens and cases was then taken up.

Dr. Wyeth thought that if in any class of cases we were justified in first making an artificial anus and allowing the patient to recuperate before resection of the bowel was done, it was in that to which Dr. Lange's belonged. He had himself lost a patient by proceeding at once to resection instead of making an artificial anus.

Dr. Abbe thought the case emphasized the importance of making an artificial anus in nearly all cases in which great distention had existed. Some years ago he had given expression to the view that fecal toxæmia was exaggerated by making resection at once, while it was not by first creating an artificial anus.

Dr. Lange thought the advantage of an artificial anus was not in avoiding further fecal absorption, but in keeping the upper portion of the gut at rest until union was complete.

The Chairman, discussing Dr. Kammerer's case, related one in which a man came to the hospital shortly after having been run into by a cart. He passed bloody urine, which was supposed to be due to injury of the kidney, since ecchymosis on the skin corresponded to the kidney region and the bladder was of oval shape. There was no fever and no tympanites. The error in diagnosis was shown by the fact that catheterization first drew off about the amount of fluid injected, but afterward forty-three ounces were withdrawn, pointing to the fact that the catheter was draining fluid from a secondary cavity, probably formed by rupture into the peritoneum. The patient dropped dead suddenly, doubtless from septicæmia, and at the autopsy they found a rupture of about an inch low in the bladder, with a pseudo-bladder formed by adhesions.

Dr. Lange mentioned a case of injury to the peritoneum, and presumably to the left ureter, caused by the young man falling astride a broomstick which broke while he was trying to balance himself upon it. Dr. Lange performed laparotomy and repaired some of the injuries, but the patient died of septicæmia.

Dr. Abbe, discussing Dr. Hobson's case, said it was a duplicate of one he had a few weeks ago, the woman having had pyosalpinx with pressure and inflammatory stricture of the sigmoid flexure of the colon, four inches of which he resected. The patient was doing well, and an artificial anus which had been made was closing.

Prisoners Poisoned by Belladonna.—A peculiar epidemic occurred not long ago among the prisoners at Beauvais, France, and the physician of the place undertook an inquiry to determine the cause. Finally he tasted the extract of walnut-leaves which it was customary to mix with the prisoners' drinking-water, and soon afterward exhibited symptoms of belladonna poisoning. Inquiry revealed the fact that, owing to the mistake of a druggist's assistant, the prison had been supplied with extract of belladonna instead of extract of walnut. The person responsible for the mistake has been sentenced to six days' imprisonment and a fine of 100 francs.

According to the *Dental Journal* the internal administration of antipyrin causes the teeth to become black. This discoloration is more intense when the enamel is defective, nevertheless experience has shown that the best remedy against it is to thoroughly wash the mouth out with a dilute acid after each dose.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, February 20, 1893.

S. B. WYLIE MCLEOD, M.D., PRESIDENT, IN THE CHAIR.

The President's Annual Address.—DR. MCLEOD in his address applied to the duties of the doctor of to-day the lesson of the ant, the spider, and the bee, as first drawn by Bacon and afterward by Dr. Thomas Watson. Like the bee, the doctor should work up the facts presented to him, putting them into such shape that they might be of benefit, not alone to himself, but to others as well. The greater part of the address was devoted to a comparison of New York to ancient and modern Rome, chiefly from a medical standpoint. The oldest hospital in the world was built upon the Tiber 350 B.C. In the ninth century there were twenty-four hospitals in Rome alone. The worst thing said about ancient Rome related to its dirtiness. Was it a mere coincidence, then, that baths were so numerous there? It was also said that fifty thousand of her people were in receipt of alms. These and certain other facts pointed to a close resemblance between that city and the present New York. Among the facts pertaining to the latter he mentioned its situation, its water supply, its great population, its advantages as a medical centre, the large number of hospitals and colleges, etc. In the case of both of the great cities the opinion which one would form would be favorable or unfavorable according to the author he might consult, for one wrote of dirty streets, another of cleanliness, one of miasm, another of salubrity, one of selfishness and mammon, another of generosity and charity, etc.

Finally, the President directed attention to the usefulness of the Medical Association—the greater influence which the profession was coming to exert in public affairs. Our methods of prevention and cure of disease, once distrusted, were now adopted. Let us be contributors to the building up of a system of rational medicine, the simplicity, consistency, and truthfulness of which would in the end command the confidence and respect of the world.

Dührssen's Cervical Incisions.—DR. S. MARX read a paper on this procedure in certain cases of labor. In the *Archives for Gynecology* (German) some two years ago there was an article by Dührssen, of Berlin, advocating a rapid method of delivery, based on ten cases, consisting in making deep incisions in the lower uterine segment where the life of the mother or child was in danger during labor. His results were excellent—all the mothers got well and only one child died. The operative procedure was not exactly new, but a resurrection of an old idea. The advantage of full splitting of the cervix over partial splitting was that in the latter there would be danger of further and dangerous tearing, while in the former this danger was not incurred, because the os was already, by the cutting, of full size. Bearing on the question of possible danger from the operation, Dührssen in his last paper gave the results of thirty-five cases. In all there was recovery, except for the loss of two children. Most of the operations were for eclampsia. Now, the usual mortality for eclampsia was twenty-five per cent., and only about ninety per cent. of the mothers recovered after rapid delivery. The object of the rapid method by incisions was to save time. *Accouchement forcé*, meaning delivery through the undilated and undilatable os, was regarded by the author as too dangerous.

The danger of infection in making the incisions would be reduced to the minimum by cleanliness. As to hemorrhage, this had not amounted to much where the uterus was well contracted; but in one of Dr. Marx's two cases, the uterus remaining in a state of atony, there was some hemorrhage afterward, which he, however, controlled; at first there was no bleeding. Packing with gauze or a ligature would check it. There had been no further tear after the original incisions. These were four in number, anterior and posterior and lateral. Union was by first intention in all the cases that had been examined subsequently.

In both of the author's cases delivery was accomplished, including extraction of the placenta, inside of fifteen minutes from the time of making the cervical incisions. Dührssen advised the use of scissors of large size, making the cuts from the vaginal junction down, but Dr. Marx had used a knife, which he thought was more likely to insure cleanliness. The first of his cases was one of partly concealed hemorrhage during labor at term, found afterward to be due to uterine fibroid which before had been suspected. Saline injections were used after delivery. Both mother and child lived, the mother's convalescence being slow. Only a trace of the incision could be felt afterward, and there was no local or general disturbance; the uterus had undergone involution and was in the normal position. Less than ten minutes elapsed from the time of the incisions to expulsion of the placenta.

The second case was one of eclampsia and coma before the eighth month, the cervix undilatable, containing an unyielding cicatrix. But two courses were open, Cæsarean section or multiple incisions, and he chose the latter, especially since the child was supposed to be dead. The operation was somewhat complicated by placenta prævia. There was no bleeding at first, but afterward, the uterus failing to contract, gauze tampon had to be used. The fœtus was found to be macerated. Convulsions did not return, but the woman remained comatose, and died next day with symptoms of heart failure and œdema of the lungs, death being in no way traceable to the operation. The author thought the operation would be called for oftenest in eclampsia.

DR. C. A. VON RAMDOHR said he could in great degree second everything Dr. Marx had written. He thought Dührssen's incisions could be more easily made with the scissors than with the knife. One of the chief dangers to guard against was sepsis. He thought there was no danger of hemorrhage. He had performed the operation in two cases, and wished he had done it in a number of others in times past. Eclampsia was the chief indication. He thought Dr. Marx had placed the death-rate from eclampsia rather low, or twenty-five per cent., and in those delivered quickly at ninety per cent. He had had an experience unfavorable to manual dilatation. He made the attempt, and failing, asked another standing by to try, and he used so much force as to tear into the peritoneum, and the patient died next day of sepsis. Dührssen's incisions should be made obliquely.

DR. EGBERT H. GRANDIN said he had not resorted to multiple incisions, for the reason that he had not seen a case in which it was indicated, although he did see a great many confinement cases in hospital and private practice. While in the face of an extreme emergency we might be called upon to do everything possible to save the woman, provided what was done was not more dangerous than the emergency itself, yet theoretically he believed the occasion would hardly arise where a safer method would not answer as well as Dührssen's incisions. He had seen one case of concealed hemorrhage, a number of placenta prævia, and also of eclampsia, yet he had never seen an instance where deep cervical incisions were called for. He would fear the incisions would extend into the peritoneal cavity. With distention of the lower uterine segment, it was hardly possible to limit the incisions very exactly. They might extend to the circular artery, or give rise to hæmatoma, or involve the peritoneum. He had a better method to propose for all such cases, one which, during the last two years, he had employed five times for placenta prævia, twice for eclampsia, once for concealed hemorrhage. He referred to *accouchement force* by use of the fingers, which had always enabled him to deliver within half an hour. It was not a difficult procedure, even though the cervix would admit but one finger. The cervix and lower uterine segment would soon yield to this form of pressure, which was safe because it had touch and judgment back of it.

DR. ANDREW F. CURRIER mentioned, as illustrating one of the conditions in which multiple incisions might be called for, a case in which the cervix had firmly grasped

of Gerdy. The function of these fibres is, as before stated, to support the hand crosswise, but they also are accessory in action to the palmar interossei in adducting the fingers, and it will be readily understood that if these fibres are contractured, or if they exist lower down than usual, the phalanges cannot be abducted to their greatest extent; in other words, abduction will be limited.

J. P. K——, a professional pianist, came to me for treatment. On examination I found that the webbing between the third and fourth fingers existed about one-eighth of an inch lower down than normal, thereby materially interfering with extreme abduction and stretching of the fingers. The patient stated that his main difficulties were in playing: 1. Scales in sixths. 2. Any dominant seventh arpeggio where the distance between the third and fourth fingers was a major third, viz., from A to C♯ and the like. 3. Broken chords in the first and second inversions, more especially in the first. 4. Any passage where the freedom of motion between the third and fourth fingers was indispensable for a clear and brilliant technique. 5. Scales in double thirds where the passage of the following fingering $\overset{3}{1}\,\overset{4}{2}\,\overset{\frown 5}{\underset{\smile 3}{}}\,\overset{3}{1}$. 6. All passages and chords which are to be played from the wrist or arm.

Operation.—After cutting off the circulation at the wrist and injecting a four per cent. solution of cocaine, I made an incision through the integument parallel with the long axis of the third and fourth fingers, and midway between both. It extended for one-fourth inch from the extremity of the webbing on both dorsal and palmar surface. The layer of fibro-adipose tissue beneath the integument, and covering the fibres of Gerdy, rendered accurate dissection difficult. I therefore removed a small portion, and coming to the fibres of Gerdy, divided them, thus lengthening the measurement from the tip of the fingers to the webbing. Caution is needed to prevent division of the nerve branches.

The result of the operation was a vast improvement in freedom of motion and in flexibility.

260 West Twenty-first Street.

THE CIRCULAR BANDAGE IN GENERAL SURGERY.

By W. W. BREMNER, M.D.,

Assistant Surgeon, Hospital for Ruptured and Crippled, New York.

The circular bandage is made of fine cotton, knitted so as to give it both flexibility and elasticity. In the Medical Record of April 9, 1892, there appeared an article on ulcers of the leg, etc., in which it was shown that the circular bandage in conjunction with a suitable local application is almost a specific in these cases in private practice. Several months' experience among the out-door patients at the Orthopedic Hospital on Forty-second Street has only shown more fully its power in these cases, and its applicability to out-door hospital work. By its use patients are enabled to continue their ordinary work during the whole period of treatment, and in most cases the first few dressings remove all pain. But the usefulness of this bandage is by no means confined to these cases. It is an ideal dressing in general surgery. In Moullin's "New Surgery," page 149, he says, "The ideal dressing is perfectly soft, elastic, absorbent in the highest degree." Again in the same page he says, "Over this (the dressing) a soft elastic bandage is placed without reverses. The ease and comfort of this arrangement can hardly be surpassed. Immobility is perfect; the patient feels that all is secure, tension is prevented, there is no cavity in which fluid can collect; the small amount that is not taken up by the tissues is driven through the edges of the wound, and harmlessly absorbed at once; vascular dilatation cannot take place to excess; and the apposition of the injured surfaces is as exact as it is possible to make it." The circular bandage is the only bandage which is both elastic and absorbent. It was very highly recommended by Gamgee, of Birmingham, in his work on surgery, and also in several articles in *The Lancet*. In minor injuries it can be applied directly over the wound, or over a very thin layer of absorbent lint or Gamgee tissue. It is specially adapted for cases where free motion combined with even compression is required, as in rupture of a deep vein in the leg or the plantaris (lawn-tennis leg), fractures and dislocations of the elbow or wrist, and sprains and dislocations of the ankle, displaced cartilage, and synovitis in the knee, etc.

In suitable cases most excellent results are obtained. The following is an illustrative case: A man who had fractured his patella with very great violence, was seen three days after in consultation. The knee was swollen extremely, the pain intense, and the temperature 102.5° F. There was every appearance of commencing suppuration. The physician in attendance proposed to make an incision and drain the joint. Instead, the circular bandage was applied firmly and evenly from the toes to the thigh, twenty-four yards were used, and the whole limb was elevated on a swing. In less than a week the swelling had entirely disappeared, the pain was gone, and the temperature normal (no swelling would ever have occurred had this case been bandaged in this way immediately after the injury).

In another case a workman in Sir Joseph Whitworth's Steel Works received a severe flesh wound about two inches across the leg from a flying fragment of metal. For three weeks he was kept at rest with the leg elevated, but the wound refused to heal and was very painful. It was then dressed with the circular bandage over subnitrate of bismuth, and the patient was recommended to take free exercise in the open air. In three days the pain was gone, and the man returned to work. In seven days more the wound was entirely healed. The bandage can be obtained through any druggist.

210 West Forty-second Street.

A CASE OF SOMNAMBULISM IN A BOY ELEVEN YEARS OF AGE.

By HENRY LEVIEN, M.D.,

New York.

On February 2d, Mrs. M——called on me with her boy and told me the following history: About three weeks ago one night she was awakened by some noise, and to her great surprise noticed her boy standing in the middle of the room stripped of everything, his night-gown inclusive, and gazing vacantly in the dim light of dawn. After a few moments he folded up his things carefully, stretching himself on the floor in order to push and hide everything under the sofa. She was so terrified that she could not command her voice, but when she came to herself she called him by his name. He responded to her call, got up from the floor, looked at her, but it seemed he did not see her, though his eyes were wide open. He was ordered to put on his things and go to bed, which orders he promptly carried out, and soon fell asleep. When questioned the next morning about his night's adventures, he could recollect nothing.

The next fit happened, or rather was observed by his mother a few nights later, when she awoke to find him stripped again, and climbing upon a chair to reach the keys which were hanging on the wall. Having secured them he moved in an automatic way toward the door, which he unlocked and was about to walk out into the cold hall of a tenement-house. At this moment he was called in and ordered to bed, and soon fell asleep.

On the third occasion he was noticed to wander in the room, handle many trinklets on the mantel, replacing them carefully from where they had been taken; he kept on until he got hold of a book hidden from him by his mother. Then he seated himself, opened the book, and acted as if he were reading, turning leaf after leaf. He was not frightened when he was called by name, but

turned his head to his mother and, complying with her wish, went to bed and slept late in the morning, complaining for the first time of severe headache.

This morbid condition was brought on, as far as I could learn, from a certain change in the boy's life. His parents, being poor, ordered the boy to leave his Grammar School, where he was always a "good boy" and had "full marks," and sent him instead to a trade school on the East side, recently established and kept up by the Baron Hirsch Fund for immigrants. He did not like that change at all. Besides, his parents, who were very religious, sent him to a Rabbi to learn the Bible and religion every evening after school. He was also very fond of reading, so much so that he would sit up nights and read if allowed to, and never get tired of his books. He borrowed books from two libraries. Thus we may presume that overwork, worry, and nervous strain worked in harmony to cause acute anæmia of the brain, the manifestation of which is the appearance of somnambulism.

The boy's intellect is bright; he replies to questions promptly and cleverly, but looks very pale and emaciated, and has the touch of an idiotic smile on his face; his pupils are widely dilated. He complains of spells of headaches, which visit him three or four times a day, but says that he "is used to them" and "sleeps them off."

As to his family history, all I could learn is that all the members on his maternal side suffer from severe, uncontrollable headaches.

I put my patient on general tonics, with Maltine and cod-liver oil, ordered more outdoor exercise and less religion, and prohibited the reading of books.

Whether this case will develop further mental derangement or, yielding to treatment and care, will improve remains to be seen.

179 Henry Street.

A REMEDY FOR STERTOROUS BREATHING.

By N. W. RAND, M.D.,

Monson, Mass.

On Friday, February 10th, I called upon an old man dying of apoplexy. As soon as I entered the house I noticed his harsh, heavy breathing, although the room that he occupied was beyond that adjoining the hall. The nurse stated that this had been the character of his respiration for seven hours, despite all efforts to relieve him by frequent changes of position. The mouth was open, and, of course, dry, the tongue drawn far back, and the lips fallen in. However unconscious of suffering the patient may have been, his breathing was certainly very distressing to friends and attendants. As I watched him, the thought of opening the glottis by placing the fingers behind the angles of the lower jaw and bringing it forward, as we do when respiration becomes embarrassed in surgical anæsthesia, occurred to me. I did this and relief was instantaneous. He breathed as noiselessly as a child. By a bit of experimenting I found that pressure upward and forward under the chin produced the same result. So, protecting the flesh with a handkerchief, a cardboard prop from the chest was improvised. With little care on the part of the nurse this was kept in position, and from that time throughout the twelve hours which the patient survived, the respiration continued quiet and natural.

This remedy may not be new to your readers, but if some have tried it they will pardon my brief mention for the sake of those who have not. I am sure that occasionally cases are seen in which, as in the one just cited, it will afford more real relief, both to patient and attendants, than everything else that can be done by the physician.

Infection by Circumcision.—Dr. F. P. Kinnicutt reports the cases of ten Jewish boys who were circumcised by a man who died afterward of consumption. The preputial wounds were infected by the operator's saliva, showing symptoms ten days later. Seven of these poor victims died, and three survived with tuberculous adenitis.

Correspondence.

THE NEW YORK ACADEMY OF MEDICINE AND QUARANTINE LEGISLATION.

To the Editor of the Medical Record.

Sir: That the Academy of Medicine would be plunged into discord before the present administration had been long in power was anticipated by many of those who, at the recent election, voted for the unsuccessful candidate. That this discord should have come so soon, and that embittered feelings among its members should have sprung up as it were in a night, could hardly have been looked for by the most confirmed pessimist.

The facts, as I understand them, are about as follows: A committee was appointed by the Academy to do a certain specified work. Circumstances wholly beyond their control interfered with the accomplishment of their purpose. They then undertook some voluntary work, or, as was stated, "went beyond their instructions." They were directed by the Academy to make their report. The report was made, received by the Academy, and the committee discharged, there being at the time a standing committee of the Academy whose functions were sufficiently comprehensive to enable them to carry on the necessary work.

At the meeting at which the special committee were discharged, no member of it, I am informed, objected to the action of the Academy. After the meeting, however, they discovered, or someone discovered for them, that they had been discourteously treated, and a special meeting of the Academy was called to vindicate them, as the politicians would say. The meeting is held, members of the special committee plead to be reinstated, and by a close vote are reinstated. Such are the facts as they appear on the surface; what there is in this beneath the surface someone better informed than myself must state. I have been more or less familiar with the proceedings of the Academy and the County Society for nearly twenty years, and this is the first time within my experience that a committee, after being discharged, have placed themselves in the humiliating position of asking to be reinstated, especially in the face of a very strong opposition. I do not know who the members of this committee are, but am informed that among their number are some of the most respected members of the profession in this city. If such is the case, it would seem not improbable that some of them are innocently acting the part of catspaws in furtherance of private purposes of some one or more individuals.

I do not assert this to be the case, but offer it merely as an inference from a superficial review of the facts, and ask for further light. One fact, however, was clear to every attentive observer of last night's proceedings, namely, that an amount of bad blood was engendered and wounds made that it will take many months to heal. If this sort of thing keeps up it will not be difficult to predict the fate that will overtake the Academy. Let the older members compare its condition during the last two or three years with its condition ten or fifteen years ago, and ask themselves whether they wish to go back to the past. If not, they must vigorously oppose all measures that can in any manner whatever be construed as having a bearing on either municipal, state, or national politics. If the Academy desires to progress in the lines heretofore followed, its members must uncompromisingly oppose every attempt to divert its energies away from the strict limits of medical science. Any effort to enlarge the scope of its work by the introduction of questions in either "social" or "political" science, will unquestionably jeopardize its future usefulness.

Respectfully yours,

X. Y. Z.

Sweet Tipperary is the enticing name under which very poor oleomargarine masquerades in Dublin.

OUR BERLIN LETTER.

(From our Special Correspondent.)

VIRCHOW AND DARWINISM—CHOLERA IN THE NIETLEBEN INSANE ASYLUM—PROFESSOR HUPPE'S VIEWS ON THE LATE CHOLERA EPIDEMIC IN HAMBURG.

BERLIN, January 27, 1893.

THERE has recently appeared a new publication by Ernst Haeckel, one of the greatest opponents of the Darwinian theories, entitled "Monismus, the Binding Link between Religion and Science; Religious Confessions of a Natural Historian," in which he gives his views, based on sound scientific principles. In this book there is the following paragraph:

"Since the death of Louis Agassiz (1873) there is but one prominent opponent of the Darwinian descendant theory living, namely, Rudolf Virchow. At that time he characterized it as an 'unproven hypothesis.'" Accidentally, Virchow recently gave his views in the *Journal of Pathology and Bacteriology*, in which he not only emphasizes his former views about Darwinism, but reiterates them, and, using still more forcible language, denounces Darwinism as unproven. These views have been translated and appeared in the *Berliner klinische Wochenschrift*. A few points are worth mentioning.

In the first portion Virchow cites the negative results of anthropology as against the Darwinian teaching, especially, however, the uselessness of looking for the proanthropos.

Darwinians find certain animals resembling men, the so-called menschenaffen (human apes), like the anthropoids orang and gorilla, and subjects that are "affenmenschen" (ape men) or pithecanthropoi.

Such statements Virchow says are merely hypotheses which Darwin and his scholars have given without any proof. Even to-day there is yet lacking the proof of the genetic descent from an animal. The hypothesis would only be a theory when the "missing link," the proanthropos, were shown. All proofs submitted to date have been illusions.

All that is known regarding the remains of prehistoric man shows that he was a homo sapiens. None of the ancient races living, concerning which investigations have of late been so actively instituted, have shown the distinct anthropic type. It is not even proven that distinct races originate from ancient groups. We do not know a single white race originating from negroes, nor do we know a single negro family originating from a white tribe.

Anthropology is to-day as given in Cuvier's zoölogy. At this time it is stated that the human being is to be looked at, according to his physical condition, as an animal. It is also stated that certain animals resemble him more than others. In this manner Galen, among other ancient anatomists, studied human anatomy by comparison with the animals having spinal columns, like the baboon, and other embryos resembling or identical with the human. Certain points of resemblance lacking in the human being or in the animal were attributed to malformation.

In the second part of his publication Virchow speaks as a pathologist. Here he proves his antagonism to Darwinism, based on sound pathological principles which he first introduced into science, as against views entertained at that time; and now he lays much more stress on them.

Virchow first mentions his views about cellular pathology, his teachings about the continual relationship of all cells (omnis cellula e cellula), and then cites his proof that the changeability of single cells caused by a pathological condition finds its prototype in a physiological condition. He also states that the union of cells to form tissues never goes beyond a physiological type.

The human skin never produces fish-scales. A human dermoid contains hair; a dermoid of a goose-feathers, and feathers of geese only, not chickens; so the hair on a human dermoid will prove to be human hair.

Every bone in a human deformity will prove to be human; every deformity in an animal will appear so and be so proven.

Virchow says: "The question of organological transformations is to be proven in a different way. The relationship of different tissues to an organ, the formation of large systems through different organs, open up such a large field, that the greatest differences from a normal type can easily result. Without going any further into this subject, I desire to state that my belief in relation to Darwinism is, that every change from the parental organism is to be regarded as a pathological condition."

Although the cholera was supposed to be extinct in Germany, there has suddenly appeared an epidemic (local) which will give the bacteriologists and hygienists plenty of food for thought. The epidemic is in the provincial lunatic asylum of Nietleben, near Halle a. S. This institution I am well acquainted with. It has existed since 1844, and was originally built to accommodate four hundred lunatics from Saxony, but was enlarged in the year 1880. It was built on the old corridor system. The newer additions are all barracks. From 1879 to 1884, seven hundred and fifty to eight hundred and fifty patients were lodged here. The institution is on the confinement system, although the patients are allowed out-of-door exercise and kept at work in the fields and gardens near by. It is situated about two English miles from the University of Halle. The first case of cholera appeared on January 14th, and the patient died the same day. A post-mortem was made, and after a careful bacteriological examination in the Hygienic Institute, no definite diagnosis was arrived at. The following day three deaths were noted, and later two more, there being in all six deaths for the first four days.

All cases were examined post mortem, and in each the intestinal contents revealed the presence of the characteristic Koch's comma-bacillus. The diagnosis of Asiatic cholera was then made. The Government at once sent Professor Koch to investigate the cause and origin of the disease.

He found that the cause lay in the fact of the inmates having drank water from the river Saale, impregnated with cholera bacilli, and he was able to detect the bacilli in a sample of this water.

Up to date the morbidity has been 109, and the mortality 38. Since the last few days, the most careful hygienic principles have been carried out (a fresh water-supply being obtained through pipes), so that the morbidity has at once fallen, proving that the epidemic will be localized. The sanitary condition of Halle is at present excellent, and as the institution is isolated the most stringent quarantine precautions will be taken to prevent the spread of the disease.

This proves that cholera can appear in an apparently healthy locality, contrary to numerous theories heretofore presented.

Professor Huppe, a former scholar of Koch, has given some important points about the origin of last year's epidemic.

He begins by stating that the deadly epidemic which surprised Hamburg last year, would have occurred equally in any large city.

He says that "there is no cholera without cholera bacilli. Bacteriological proof can be regarded as positive when prior to an epidemic comma-bacilli have been found, and following them, the disease spreads. In the course of an epidemic as it existed at Hamburg cholera bacteria were bound to enter the Elbe, as non-disinfected excrements were washed into it through the canals of the city or its sewers. Huppe thinks it very wrong to regard river water or anything else as a cause of the cholera, until a positive proof has been found, as it was in the Elbe River. It is not only necessary to forbid drinking water containing comma-bacilli, but also to forbid navigation on such rivers, or ships and crew will be a direct means of spreading the infectious materia morbi. It is highly important to order strictest cleanli-

ness to prevent the secondary effects of growth of cholera colonies and their products. In such localities river-bathing in the summer should be forbidden. Huppe confesses that the last epidemic of 1892 did not advance our previous bacteriological or etiological knowledge as far as the proof of the water infection was concerned. He gives as the most important cause the drinking of infected water at Hamburg, and states that he, in company with other hygienists, frequently warned the Hamburg authorities of the dangerous condition of their water-supply long before this latter epidemic originated. The only preventive Huppe believes in is to have a central station of water which can be properly guarded against infection, and in this way transmitting the water-supply to different sections of a city. He thinks it futile to quarantine against a city as was done against Hamburg last summer. He reminds us of England in 1892, without quarantine, and without an epidemic. He says that while England abandoned such ideas, in Germany all hygienic teachings were at once forgotten, and a vigorous quarantine ordered, which put the German scientists in a shameful light. It was a fight of the bureaucrats against the autocrats. Huppe gives some very new points in regard to the favorable conditions present in Hamburg at the time that cholera was first introduced. It is a well-known fact that cholera bacilli will not live very long in water, as they are supplanted by other micro-organisms, such as the bacilli of rotten wood and water bacteria; the cholera bacilli furthermore do not find their proper nutrient in river water. But under other peculiar circumstances the bacilli of water and of decayed substances will die, and their remains will furnish a nutrition for the comma bacilli.

In Hamburg such a condition of affairs seems to have most probably existed, as owing to the high temperature (summer) and to the introduction of disinfectants, the death of these other bacilli might have easily occurred.

Huppe finally emphatically denies the possibility of cholera by contagion only, and declares against the police regulations as they were enforced. The Germans cannot be so terribly predisposed to cholera, for although the most favorable conditions prevailed at Hamburg for a general infection, only three per cent. of the total population acquired the disease.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE PATHOLOGY OF WEST AFRICAN BLACKWATER FEVER—EXHIBITION OF MICROSCOPICAL PREPARATIONS—CHOLERA—PREVENTIVE INOCULATIONS—ADDRESS BY M. HAFFKINE AT THE HALL OF THE CONJOINT ROYAL COLLEGES—HIS METHOD AND FURTHER WORK—THE HUNTERIAN ORATION AT THE ROYAL COLLEGE OF SURGEONS—PRESENCE OF ROYALTY—HUNTER'S WORK AS AN EXPERIMENTER, BIOLOGIST, AND SURGEON.

London, February 4, 1893.

A MEETING of the Pathological Society, on January 31st, was of special interest to me, as microscopical preparations were exhibited made from organs of persons who had died from African "blackwater fever." I have had the opportunity of studying the clinical history of African fevers in a number of cases, and can, therefore, appreciate the importance of pathological investigations of the subject. Those who have to treat the cases are but few in number, are scattered over wide areas, and are rarely equipped for scientific work. It is, therefore, highly satisfactory that at length diseased organs have been sent over from West Africa by Mr. Rendall, and preparations made by Dr. Wheaton. He said that for a description of the disease he was indebted to Mr. Crosse, principal medical officer to the Niger Company, who last year published some "Notes on Malarial Fevers," and also to Dr. Battersby, who was formerly a medical missionary. The disease generally occurs in those who have had malarial fever—indeed most observers say always—though I have known it carry off a new arrival in West Africa who had not had time for previous disease. After a short preliminary cold stage, or only general malaise, in which the temperature rapidly rises to 103° F. or higher, the urine becomes dark and even black, and jaundice with obstinate vomiting sets in, soon followed by coma. The urine is acid and contains hæmoglobin, but no corpuscles. Relapses or fresh attacks are sure to follow another chill. Apart from the vomiting and high mortality, Dr. Wheaton thought the disease resembled paroxysmal hæmoglobinuria as seen in this country. This suggestion is supported by the preparations submitted, which are similar to the few observations which have been made on paroxysmal hæmoglobinuria, as it is so seldom fatal. Thus Dr. Wheaton's preparations showed that the tubules in the pyramids were full of masses of hæmoglobin, and the lumens of the secreting tubules were packed with pigment granules. The cells of the secreting tubules were swollen and granular. No corpuscles were extravasated. The spleen showed collections of amorphous hæmoglobin. The hepatic cells were full of pigment granules.

Paroxysmal hæmoglobinuria is now generally considered to be due to the breaking up of the colored corpuscles in the circulation, the pigment being partly excreted by the kidneys and partly stored up in the liver and spleen. The enormously increased mortality in Africa, supposing the two diseases to differ merely in intensity, is to be ascribed to the greater variations of temperature—the exciting cause being chill in both cases. A similar disease prevails in animals. The plasmodium malariæ has not been detected in blackwater fever. Nevertheless some consider that it is malarial in origin, and certainly many cases are only to be distinguished by their intensity from intermittents of African origin, and still less from some remittents which have been described by French observers.

Dr. Samuel West described a case he had seen in a student, aged twenty-seven, who had been in West Africa. On the third day the temperature was 104.5° F. and blood passed in the urine, and next day there was intense jaundice. There was hæmoglobin in the urine, but no bile, vomiting was constant, and hemorrhages occurred from the gums and accidental abrasions of the skin. The temperature fell below normal, and he died on the seventh day. Dr. West thought the clinical affinities of the disease were with malaria, and another speaker gathered from conversations with Mr. Crosse that his view was the same. I humbly incline to that view, while admitting the force of the objection that the plasmodium malariæ has not been detected in blackwater fever. Still, considering the few who have had the opportunity of investigating this point, it may well be that such a discovery will yet be made.

London, February 11, 1893.

WE have just had somewhat of a novelty in the lecture line. At the Examination Hall of the two Royal Colleges M. Haffkine has given us (through Dr. Ruffer) an account of his work at the Pasteur Institute on the subject of preventive inoculations for cholera. He had already given a demonstration at Netley, and stayed in this country in order to address us on Wednesday, and to visit Cambridge on Thursday. In the coming week he starts for India to pursue his work in the "home of cholera," being furnished with a letter from the Indian Secretary to the Governor-General, requesting the Indian Government to afford him every facility in pursuing his investigations in localities where cholera prevails. M. Haffkine believes that his *virus fixe* holds out a good hope of coping with cholera, and he has proceeded in a careful, scientific manner, very different from the crude injections tried some years ago by Dr. Ferrán in Spain. Pasteur has shown that most parasitic microbes diminish in virulence from systematic cultivations in artificial media, and that they may also have their virulence intensified by cultivations in special animals or special tissues. This is particularly well seen in the case of hydrophobia.

Proceeding on this line Dr. Haffkine obtains similar results by varying the tissues or the positions inoculated. Working with Professor Roux, he found he could not keep the virulence of his organisms in cultivations, and could not obtain pure cultures of standard strengths, even by cultivating in the intestines of animals. Pfeiffer and Nocht had tried passing the microbe through animals and cultures alternately. Then Gamaleia cultivated in the pleural cavity. Hueppe and Pfeiffer suggested the peritoneum, and this has been found very satisfactory by Haffkine and Roux. They found they could, by introducing different quantities, kill a guinea-pig in a longer or shorter time as desired. They have obtained a virus so "exalted" that it kills very rapidly. It has a very corrosive action, producing sloughing and great œdema, but these inconveniences are greatly diminished by further cultivations in the presence of oxygen. The organism cultivated through several generations, either alone or with 0.5 per cent. carbolic acid furnishes Haffkine's first vaccine, and gives use to some œdema and slight febrile reaction.

If an "exalted" virus is injected under the skin of an animal that has received the "first vaccine" it causes œdema but no sloughing, so he gets his "second vaccine." An intra-peritoneal injection of an excessive amount of "exalted virus" will now produce no effect on the animal and it is therefore expected that a similar protection must be conferred against the natural disease. M. Haffkine has protected animals which have, after four and a half months, resisted enormous doses of cholera-poison. Whether the protection will last much longer and can be conferred on the human subject has yet to be seen. Guinea-pigs were exhibited to show the effects of the inoculations. Six protected with the first vaccine were perfectly well. Of six control animals unprotected and injected with only half the dose of the others two were dead, two very ill, and the other two "will be dead to-morrow." Another guinea-pig was shown which had been injected with the weak vaccine; there was only a slight œdema at the point of inoculation. Another had had an injection of a stronger virus and in this a distinct abscess had formed and the skin over it was necrosed so it would require some time to heal. Another animal inoculated into the peritoneal cavity with the same quantity died within twenty-four hours. The one which received the weak virus was to have a further inoculation, but then no abscess would form. That is the reason for employing the two vaccines in man. The weak, or "first," produces only slight œdema. After this the strong will only produce a small swelling but no abscess.

While in England, M. Haffkine has inoculated two gentlemen—one a medical officer of health, the other about to leave for Persia. The reaction has been very slight, one of the patients saying it was much less disagreeable than being vaccinated. Dr. Pavy, on behalf of the assembly, thanked Dr. Haffkine for his interesting demonstration and expressed the hope that the promise afforded by his observations might be realized. This hope was certainly entertained by those present, who will follow M. Haffkine's further work, he may be sure, with interest and most cordial good wishes.

London, February 17, 1893.

When it became known that the Prince of Wales and the Duke of York would be present at the Hunterian Oration, there was naturally a full audience to listen to Mr. Thomas Bryant, the President of the College, who undertook the duty of Hunterian orator. Accordingly the theatre of the College of Surgeons had a very distinguished and representative assembly on the 14th instant. This year is the centenary of Hunter's death, as he died in October, 1793. The oration is delivered on the anniversary of his birth, and the 14th instant was the one hundred and sixty-fifth such anniversary, as he was born February 14, 1728. The well-known portrait by Sir Joshua Reynolds hung in view of the audience and on the table stood a small clock which had been Hunter's, and which the orator stated "goes" well and keeps good time yet. Although so many have preceded him, Mr. Bryant contrived to say much in a manner which gave his oration life. Of course new facts are not to be expected as to Hunter's life and work after so many have searched for them in all directions, but it is something to give a powerful stimulus to continued good work by an appeal to the example of so renowned an investigator.

As has been often and well said, the Hunterian era is the starting-point of modern surgery, and from his time, declared our orator, every good surgeon has belonged to his school. He had remarkable natural aptitude for the study of living creatures, and he saw as soon as he began to study surgery that comparative anatomy and physiology were necessarily preliminaries to the study of disease. He gave himself, therefore, to unwearied work, and his labor, in the words of his great follower whom we have lately lost (Sir R. Owen), "not only established a body of physiological doctrines to the happy influence of which every cultivator of the healing science now bears grateful testimony, but they deserve to be viewed in the light of a first attempt to arrange in one concatenated system, the diversified facts in comparative anatomy." But I must make no more quotations from those interspersed in the oration, but observe that Mr. Bryant dealt with Hunter's character first, then proceeded to regard him as, *a*, an experimenter; *b*, a biologist; *c*, a surgeon. In each of these respects his work has so often been examined by able successors that there is little more to be said beyond the great lesson his life conveys, but this may be conveyed in so many ways, and give rise to so many new ideas, that it is a continual wonder to everyone who investigates the matter, perhaps even more than the enormous amount of work which he accomplished and the accumulation of material he left to others.

It is, perhaps, as a surgeon that such an audience as was addressed by Mr. Bryant would be most interested, if not critical. To Hunter surgery owed the recognition of "Nature's resources in the cure of disease." He saw clearly that repair is a constructive process and is not identical with inflammation—is rather a process of growth. He even came near to modern discovery when he said that "air will be injurious to man and animals by its containing specific particles of contagion." Then again he reached far forward when he said that "in the treatment of wounds, in order to facilitate the natural process of healing, little is to be done except removing impediments to the natural cure."

Mr. Bryant made further very interesting remarks on Hunter's surgical work. Of course the subject of aneurism is well-worn and almost synonymous with his work; but his views on cancer, on varicose veins, on hydrophobia, and on the use of stimulants are well worthy of attention and afforded the orator an opportunity of laying before his audience interesting remarks and showing that the seeds of science Hunter had sown possessed the principle of life which secured their growth. The audience was evidently quite satisfied and pleased with the oration, after which Professor Stewart the Conservator, conducted the royal visitors over the museum.

This is not the first Hunterian oration the Prince of Wales has attended, as he was present at that delivered some fifteen years ago by Sir James Paget. His presence this year with his heir shows a continued interest in medical science, which will not surprise any who saw His Royal Highness when the International Medical Congress was held in London.

A Correction.—Dr. Sternberger wishes to give the fullest credit to Dr. R. H. M. Dawbarn for the idea of using "salt water in large quantities at the temperature of 118° F." in the two successful cases of transfusion reported in the issue of the Record of January 9th.

Carcinoma, according to Dr. Herrick, of Cleveland, is a form of perverted nutrition.

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Original Articles.

ESTABLISHING A NEW METHOD OF ARTIFICIAL RESPIRATION IN ASPHYXIA NEONATORUM.[1]

BY J. HARVIE DEW, M.D.,

NEW YORK.

THE best method of practising artificial respiration in asphyxia neonatorum has, within a comparatively recent period, been made a subject for discussion by Dr. Lusk's most excellent paper, read before the Academy in December, 1890, and published in *The American Journal of the Medical Sciences* for February, 1891, and more recently by Dr. W. E. Forest's article in the MEDICAL RECORD of April 9, 1892.

Professor Lusk offered no new method, but discussed and made more prominent the method known as that of Schultze, and impressed the importance of the use of the catheter for the removal of mucus and foreign matter from the trachea and larger bronchi, and also its use in artificial respiration by direct inflation.

In the discussion which followed this paper I took occasion to state that for many years I had practised a method which I regarded as original, and which I believed to be of great practical value. I then briefly described my method.

Dr. Forest, in the MEDICAL RECORD, finds all of the adopted methods in one way or another faulty, and presents one of his own (another modification of Sylvester) as "filling the bill."

Of my statements before the Academy he writes: "Another method that has been widely advocated and practised, and yet is utterly worthless, is Schroeder's. At a recent meeting of the New York Academy of Medicine, a physician present [referring to myself] claimed that this method was most efficient and put it forward as original with himself. In both cases it will be seen he was mistaken."

Dr. Forest then describes "Schroeder's well-known method," as he terms it, not exactly as Schroeder himself describes it, but rather approximately, as I described mine before the Academy in 1890.

In this paper I desire to show: 1st. That Schroeder's method is no more like mine than mine is like that of Schultze. Also that the principle and the object of all three of these methods, viz.: those of Schroeder, Schultze, and my own are nearly or about the same, while the plan of procedure is entirely different. 2d. That my plan is original, having been adopted independently of any idea secured from text-books or elsewhere, and that I practised it in 1871, or early in 1872, at least two years before Schroeder's first publication of a method, which appeared in 1874, and before I had ever known of Schultze or of his method, which was published in 1871. 3d. That my method is the promptest, most powerful, and most efficient for immediate use which can be practised with perfect readiness and ease to the operator.

Schroeder, in his work on obstetrics, 7th edition, 1882, seems to especially advocate Schultze's method, which should be performed by "grasping the infant in such a manner that the operator's thumbs shall rest on either side upon the anterior thoracic wall while the index finger occupies the axilla, and the remaining fingers are placed diagonally across the back. The child is then allowed to hang at arm's length between the knees of the obstetrician, its face being turned to the front. The child is next swung upward until the arms of the operator reach an almost horizontal position." These two movements induce inspiration. "The swinging motion is then arrested, flexion occurs in the child's lumbar spinal region, its head is directed downward, and its lower extremities fall slowly toward the obstetrician until the whole weight of its body rests upon his thumbs." This movement induces expiration.

Schroeder next speaks of catheterization for the removal of mucus, etc., and in presenting what is termed his method advocates it in no terms of special commendation, but apparently in the most casual way. He simply says: "If no foreign particles have been breathed in, or if they have already been removed, then one can employ artificial respiration in still other ways, thus: While the babe is in a bath one can enlarge the thorax, in that one supports the back of the babe while its head, arms, and pelvis fall backward; a forceful expiration is then effected by bending up the baby over its belly, thereby compressing the thorax." This is literally all that Schroeder has to say of this method for which he has been given credit.

Francis Henry Champneys, in his article reporting his experiments on the cadavera of still-born children, published in the "Medico-Chirurgical Transactions," dated 1881, condemns Schroeder's method as worthless. He presents the method as follows: "Schroeder suggests [please note the fact that Champneys does not say that even Schroeder himself ever advocated or practised this method, but merely that he suggests] supporting the child by the back only, letting the arms and legs fall backward, which will produce opisthotonos; and then bending them in the contrary direction, producing emprosthotonos. The latter to produce expiration, the former inspiration."

The only explanation of Schroeder's method I have been able to find in any English or American text-book appeared in the first edition of Lusk's work on obstetrics, and he has not thought it of sufficient value to reproduce it in subsequent editions. Yet Dr. Forest says in his article that it "has been widely advocated and practised," and at the same time quotes Champney's and declares it worthless.

I do not believe that anyone could successfully practise this method as Schroeder directs, or that it has ever been to any extent taught or "advocated."

The plan I have adopted is no more like Schroeder's than those of Pacini, Bain, Schücking, Schüller, and Forest are like Sylvester's.

I mention this fact because there is one most important difference to which I desire to call attention. It is, that all of these methods named have been suggested by, and are simply, to a large degree, modifications of that of Sylvester, while my plan was suggested by no previously adopted method. At the time I began to practise it Schroeder's method (which most nearly resembles mine) was not in existence, or certainly had not been published. Indeed, it was not published till 1874, two years or more afterward; and at this time Schultze's method was in its infancy, and entirely unknown to me.

I cannot now remember exactly when I began to practise this method. The first instance I can well authenticate occurred in the practice of Dr. George T. Harrison, of this city, who is present with us to-night.

I was called by him to assist in a difficult case of labor which he was attending in the old building that stood at the corner of Fifth Avenue and Fifty-fourth Street, on the

[1] Read before the New York Academy of Medicine, February 2, 1893.

ground now occupied by the handsome "Vanderbilt" residences of Twombley and Webb. This was either in the latter part of 1871 or the early part of 1872. The infant at birth was thoroughly asphyxiated. The work of resuscitation devolved on me. It took considerably over an hour to fully establish the respiratory process. My method was then practised to relieve myself of the fatigue which that of Sylvester imposed, so the two methods were alternated during the treatment. I have continued its use, almost exclusively, from that time till now.

Description of Method.—My directions for its practice are: To grasp the infant with the left hand, allowing the

neck to rest between the thumb and forefinger, the head falling far over backward, straightening the mouth with the larynx and trachea, thereby serving to raise and hold open the epiglottis (as demonstrated by Benjamin Howard, in his excellent article, "A New and Only Way of Raising the Epiglottis," *British Medical Journal*, November, 1888). The upper portion of the back and scapulæ resting in the palm of the hand, the other three fingers to be inserted in the axilla of the baby's left arm, raising it upward and outward.

Then, with the right hand, if the baby is large and heavy, grasp the knees in such a way as to hold them

with the right knee resting between the thumb and forefinger, the left between the fore and middle fingers. This position will allow the back of the thighs to rest in the palm of the operator's hand. If the infant is small and light, it will be found more convenient and easier to hold it in the same way by the ankles, instead of the knees, allowing the calves instead of the thighs to rest in the palm of the hand.

The next step is to depress the pelvis and lower extremities so as to allow the abdominal organs to drag the diaphragm downward, and with the left hand to gently bend the dorsal region of the spine backward. This enlarges the thoracic cavity and produces inspiration.

Then, to excite expiration, reverse the movement, bringing the head, shoulders, and chest forward, closing the ribs upon each other. And at the same moment bring forward the thighs, resting them upon the abdomen. This movement arches the lumbar region backward, and so bends the child upon itself as to crowd together the contents of the thoracic and abdominal cavities, bringing about a most complete and forcible expiration.

While this movement is a powerful one, the operator can, by his manipulations, accomplish it without shock, and render it as gentle as he pleases.

It is evident from Dr. Forest's article in the MEDICAL RECORD, already alluded to, in which he condemns Schroeder's method as worthless, that the plan I propose will be denounced by some one, and for the same reasons that Champneys assigned in discussing Schroeder's method.

I therefore think it best to state that Champneys's experiments were made by securing one end of a tube in the larynx of a still-born cadaver, while the other end was immersed in a fluid. He then endeavored, by exciting the inspiratory act, as directed in the different methods of artificial respiration, to determine by the ascent of the fluid how much air each one of them was capable of sucking in.

His experiments led him to the conclusion that the methods of Schultze and Sylvester will suck in the greatest

amount; that the modifications of the Sylvester method are the next most powerful, and that those of Howard, Marshall Hall, and Schroeder excite no perceptible suction, hence are worthless.

These experiments were all made on the cadavera from twenty-four to thirty-six hours after birth, when rigor mortis had, or certainly had had, time to become as fully established as is usual in such cases. Under these circumstances it seems to me easy to understand that the action and forcible procedure incidental to the Schultze and Sylvester methods would exhibit a decided suction, while the much more passive movements of the Howard and Marshall Hall methods, and the plan "suggested" by Schroeder, would draw in no appreciable amount of air. I cannot see how any other results could have been expected.

Only think! Take an infant thirty-six hours dead, with the muscles, ligaments, cartilages, and even the bones to a certain extent stiffened, or deprived of their elasticity, place a tube in its larynx as stated, and then with a hand supporting its back allow the head and shoulders to gravitate to one side, its pelvis and legs to the other. Now, how much air do you suppose is going to be sucked in? I should certainly answer none, even if I had never heard of Champneys and his experiments.

Finding by this exceedingly passive movement of producing opisthotonos in the cadaver that no air was drawn in, Champneys at once proceeded to account for the failure by stating that this method (Schroeder's) is based upon the *a priori* reasoning that the capacity of a flexible cylinder increases when it is curved, and concludes as follows: "But the principal reason lies in the fact that in children who have never breathed the position of the thorax is one of expiration and not of inspiration, the thoracic walls are completely collapsed, and there is no thoracic cavity or cylinder to deal with. There is nothing to procure descent of the diaphragm, and the thoracic cavity cannot be expanded in any direction by such means."

Some of the features of the plan I have adopted are more like to Schroeder's than to any other thus far published. This fact, and the comments that have been made, have led me to direct your attention thus especially to what Schroeder's so-called method is, and to what has led Champneys to condemn it. I do not think these conclusions will apply at all to my method, and I hope you will all agree with me when I present to you the following explanation:

At birth an asphyxiated infant is perfectly limp and flexible. Its muscles are like so many wet rags and offer no resistance till stretched out to near or about the limit of their elasticity. In the Sylvester method the ribs are not lifted till the pectoral muscles have been put well upon the stretch, for the accomplishment of which the arms must be forcibly pulled upward.

When this is done the chest-cavity is increased laterally, and the diaphragm is flattened out, pressing the abdominal organs to some extent downward, thus serving, in a measure, to increase the cavity vertically. This produces the suction which every one recognizes, and which has made this method, up to date, the most universally known and adopted.

My method accomplishes exactly the same results in a different way. To understand how it is done, let us consider for a moment the anatomical structure of the chest-walls. These walls are supported by, and have their fixed point in, the attachment of the ribs to the dorsal vertebræ. They are composed mainly of the ribs, their cartilages, the sternum, and the intercostal and pectoral muscles.

The muscles, as stated, offer no resistance and no assistance, except for traction.

The ribs constitute not only the most prominent structure in the formation of the chest-walls, but their movements are essentially important in any effort artificially or naturally to draw air into the lungs. It is upon their peculiar arrangement, formation, and attachments that the active inspiratory movement of my method depends.

They are twelve in number on each side, and are separated from each other at well-defined distances. They vary in both length and shape from the first to the twelfth. They can be made to very closely approximate, if not to overlap each other, and are capable of as wide a separation as the elasticity of the intercostal muscles will permit. They terminate at the sternum in flexible cartilages, which vary in length and render them very movable.

Posteriorly they have almost a fixed attachment. Their heads are closely bound by a strong ligamentous union to the bodies of the dorsal vertebræ, while their tubercles, located nearly an inch from their heads, are bound with equal firmness to the lateral processes of the same vertebræ. Only a slight rotatory motion exists at this articulation, which, together with the peculiar shape of the ribs and the flexibility of their anterior attachments, enables the normal inspiratory act to be performed, the ribs at each effort being drawn upward and outward.

Now comes the important fact I wish to impress: It is, that in my method of artificial respiration, owing to the firm attachment of the ribs to the bodies and processes of the vertebræ, as soon as the dorsal region is curved backward and the relative position of the bodies and transverse processes are changed, the ribs and their intercostal muscles open out like the segments of a fan and, at the same time, owing to their peculiar shape, all of the bodies of the longer ribs are forced outward and the diaphragm is flattened. Thus, both the lateral and vertical diameters of the thoracic cavity are increased.

How much air is actually drawn in and how much reflex action is excited by the inspiratory effort of this or any other method in the first few movements it is difficult, from a clinical standpoint, to determine, but after keeping up the operation for a few moments, in any favorable case, it will be easy to recognize unquestioned evidences of suction.

The infant whose photograph I herewith exhibit, was born a little before, and died a short while after, 7 P.M. I was not present at its birth, but reached the bedside a few minutes after death. The photographs were taken at 11 A.M., sixteen hours after death. I then performed my method of artificial respiration, and was able to force air in and out of the lungs with each movement. The evidence was made positive by a very audible sound, excited by the escape of air at each expiratory effort.

It is very frequently, if not usually, the case when resuscitating an infant, that a decided grunt is heard with the expiratory movement, after once the introduction of air has been established.

The expiratory movement in this method is one of its most perfect and advantageous features. Indeed, I believe that a complete expiration is for at least two reasons, of equal, if not of greater importance than that of inspiration: 1st, because if one cubic inch, or any given amount of air, is drawn in, it is most desirable that all of it shall be forced out in the movement that follows: 2d, because the expiratory effort in artificial respiration should not serve only for the expulsion of air, but should at the same time be a means of improving and hastening the general circulation.

If the thoracic cavity is thoroughly but gently compressed, the heart and large blood-vessels will be unloaded in the direction of least resistance—this of course must be forward and in the right direction as the cardiac, aortic, and pulmonary valves will open for its forward and close upon its backward flow. The accomplishment of this result with each expiration cannot be otherwise than most beneficial to the sluggish circulation of an asphyxiated infant.

The Schultze method fills this requisite, as pointed out by Dr. Lusk in his article upon this subject; but the action is too violent and cannot be regulated with gentleness. The Sylvester method and its modifications, the mouth-to-mouth insufflation, and inflation by catheterization, are all deficient in this particular. They, each of them, depend for their expiratory movement on lateral pressure over the lower ribs, upon the epigastrium, or both together. This plan of expiration is objectionable because: 1. It does not expel all of the air from the lungs, if any has been drawn in. 2. It causes the centre and posterior portion of the flabby diaphragm to descend, thereby increasing the vertical diameter of the chest-cavity. 3. It produces but slight, if any, pressure upon the heart and large blood-vessels which occupy the mediastinum; certainly not sufficient pressure to be of any material benefit to the circulation.

In the expiratory movement of my method, when the shoulders and chest are brought forward, and at the same moment the thighs are made to rest upon the abdomen, including the epigastric region, the pressure upon the contents of the thoracic cavity can be made as forcible as the operator thinks best. The ribs are crowded upon each other, closing up the intercostal spaces, and the organs of the abdomen are pushed upward upon the diaphragm, so as to diminish the vertical diameter as much as it is possible to do. By these combined forces the expulsion of air is complete, and the desired effect upon the heart and large blood-vessels is most favorably secured.

Every obstetrician who finds that he has delivered an

asphyxiated infant, proceeds at once to excite the respiratory act by reflex stimulus. To do this he moves the infant from side to side, spanks it, sprinkles water upon it, and possibly dips it alternately into hot and cold water; but when the asphyxia is too profound to be thus relieved, he is forced to resort to some one of the many methods of artificial respiration.

Of the established methods, Sylvester's and the plan of mouth-to-mouth inflation, are probably by far the most universally adopted, next that of Schultze, then catheterization and insufflation, and finally the individual plans not commonly known. One or more of these methods must be resorted to by every practitioner, hence it is a matter of unquestioned importance to be able to select the best among them, not only for individual use, but for instruction in our schools of medicine.

As previously stated, the Sylvester and the mouth-to-mouth plan offer good inspiratory, but very imperfect expiratory, movements. The Schultze method, though very efficient, is often inconvenient for want of space, is too chilling to the infant, and in many instances is too violent in its movements. Catheterization and insufflation is not easy, and is, as a rule, unsafe in inexperienced hands. Of the individual and private methods I have nothing to say, except of the one under consideration.

In maternity hospitals, where the obstetrician is offered every facility, and in the homes of the wealthy, where there are so many conveniences, the difference between the methods of artificial respiration may not be a question of so much importance: but in that very much larger class of cases occurring in the homes of the middle and poorer people, where there are but few conveniences, he must always endeavor to select the most ready and favorable plan for immediate use.

In any prolonged case of asphyxia the operator will become greatly fatigued in constantly pursuing anyone of the methods proposed, and will find great relief in practising first one plan and then another.

Advantages of the Method.—I claim for my method the following facts and advantages:

1. That it is most efficient in all cases where artificial respiration, in asphyxia neonatorum, is indicated.

2. That years of experience has served to prove to others, as well as myself, its unquestioned value.

3. That it can be practised with ease and readiness to the operator.

4. That its movements are easy and can be quickly resorted to, at any moment and anywhere.

5. That while its inspiratory movement will be found, by experience at the bedside, to be as efficient as that of other methods, that the expiratory movement is far more complete and satisfactory than in any of them.

6. That nearly, or about all, of the air drawn in can be expelled.

7. That owing to the force, and at the same time to the absolute control, which the operator has over the expiratory movement, he is able to compress the contents of the thoracic cavity to just exactly that degree deemed by him wisest and best, thereby favoring and hastening the general circulation.

8. That the operator can sit or move from place to place about the room, greatly to his relief from fatigue, still continuing the respiratory movements.

9. That if thought best, the movements can be kept up while the infant is immersed up to its chin in hot water.

10. That by elevating the buttocks and depressing the head and shoulders, the expulsion of mucus can be effected, as in the Schultze method.

11. That for alternating with Sylvester's and other methods, it possesses peculiar advantages, affording great relief to tiresome positions in protracted cases.

12. That it possesses all of the advantages of the Schultze method and none of its disadvantages.

13. That the method is prompt, reliable, easy to perform, and perfectly safe.

252 West Fifty-fourth Street.

CARCINOMA ON THE FLOOR OF THE PELVIS.

By MARY A. DIXON JONES, M.D.,

Brooklyn, N. Y.

The patient was near fifty years of age, and apparently in excellent health. She had been treated for many years by various physicians for displacement of the uterus and other pelvic miseries which are supposed to result therefrom, but without relief. She said she was growing steadily worse, and that at times her sufferings were most intense.

I found the uterus drawn to the extreme right, and, with the corresponding tube and ovary, fixed by inflammatory adhesions. The left uterine appendages were prolapsed and adherent to a mass, the size of a small orange, in the centre of the pelvic floor. This mass or tumor was soft, extremely sensitive, and with some apparent fluctuation. Her last physician, diagnosing it to be a misplaced uterus, had from time to time made various and continued efforts to put the supposed organ in position. These manipulations gave the patient great distress, the pain often lasting several days. I advised the immediate removal of the tumor as her only chance of recovery. Her husband was anxious that the operation should be performed, but wished it to be done in his own home, and requested me to call and make the necessary arrangements. I refused to perform such an operation unless every circumstance, as far as I could judge, was the most favorable for the patient's recovery. I recommended certain changes in a portion of their beautiful home, but, as the simplicity and asepsis of a hospital can rarely be established in a private residence, I suggested that the patient enter the hospital. Doctor E. A. Wheeler, who had advised the patient to consult me, also thought it best. She entered the Woman's Hospital, of Brooklyn, on March 16, 1888. So much had she suffered that she said to me the day before the operation, "If you were to tell me that I had but one chance in twenty-five, I would take that chance and have the operation."

The operation was performed on March 19, 1888. I removed first the left tube and ovary, with the tumor to which they were adherent. All had grown so firmly to the floor of the pelvis that the separation was attended with great difficulty, and followed by severe hemorrhage, which was almost uncontrollable. Nothing checked it but securely clamping the torn edges of the wound, and for this I used forceps whose handles projected beyond the abdominal incision. I had previously removed considerable portion of what I supposed to be affected tissue. The pseudo-membranous adhesions which bound the uterus and right uterine appendages were separated and the latter removed. The peritoneal cavity was thoroughly flushed with water sterilized by heat: a drainage-tube was introduced, and for still more thorough drainage a large strip of gauze was

inserted in the abdominal wound, extending beneath the line of sutures down to the floor of the pelvis. The abdominal wound was dressed, the patient placed comfortably in bed, and, in every respect, she seemed to be doing well. Still there were indications that the disease was malignant, and I had little hope of her recovery. Statistics show that operations for malignant disease of the abdomen are almost invariably fatal.[1]

The patient came comfortably out of ether. In two hours the drainage-tube was drawn off, the dressings were found fully saturated with bloody serum, and new dressings were applied. So for several days three or four times in the twenty-four hours the wound was redressed, and in twenty hours the forceps and gauze were removed. I believe that the packing of the peritoneal cavity with the gauze saved the patient's life. She continued to improve, and in five weeks was able to leave the hospital. She did so well that I dismissed the idea of the disease being malignant, and it was not until the eighth day of the following December, nine months after the operation, when, in due course, I studied microscopically the specimen, and found that it was a cancer, and portions of it were of a most malignant type. The left tube and ovary were both found infiltrated with cancerous growth. The right tube also showed inflammatory reaction, and gave indications that the cancer was rapidly spreading.

The same day I discovered this condition, I sent for the husband and Dr. Wheeler. I informed the former of his wife's condition, and that in the natural course of the disease the patient could not live more than a few months. Dr. Wheeler said, and as he afterward wrote me, "There was no doubt the operation had greatly prolonged the patient's life, and relieved in a great measure her sufferings;" still it was evident the malignant degeneration had been existing only about one year, and if the growth had been removed at an earlier period, or before it had infiltrated surrounding structures, the disease might have been entirely eradicated and the patient saved.

Cancer is primarily a local disease induced by local irritation. Dr. George F. Shrady, in his invaluable article on "The Curability of Cancer by Operation," says: "The disease has a local origin, and is, therefore, removable, and the constitution becomes affected only secondarily by a more or less dissemination of original cancer-germs."[2]

In this instance the disease was clearly of local origin. The patient had been sick since the birth of her last child, then thirteen years of age. At that time there was some sepsis, which resulted in pelvic peritonitis, salpingitis, and oöphoritis, followed by the displacement of the Fallopian tubes and ovaries, and the formation of pseudo-membranous adhesions. Repeated attacks of peritonitis increased the disease, and the long-continued local irritation developed the cancer, which finally ended her existence.[3]

If the uterine appendages in this patient had been removed eight or ten years previously, the source of the irritation would have been removed, and the development of cancer in all probability prevented. At that time, too, the necessary surgical interference would have been comparatively simple. Still, if the operation had then been performed, we would doubtless have been told of "mutilating and preventing women from having children." Yet we notice in all these thirteen years this woman had no child, the disease that had caused the suffering had produced an incurable sterility, and rendered her life one continued period of invalidism. In almost every instance perhaps, without exception, when this operation is needed, a woman is, by her very condition, already rendered sterile; and it is as good surgery to remove such diseased organs as to amputate a limb for the various causes considered necessary.

The case of this pelvic tumor has been one of exceeding interest to me, and from time to time I have returned to the study of it; but repeated and careful microscopical examinations have not only left unsettled the question as to the cause of the disease, but even as to where the cancer started. According to modern views, first announced by Thiersch and Waldeyer, a normal epithelial structure is required for giving rise to cancer. There is no such structure on the floor of the pelvis, unless we resort to the hypothesis that a parovary was the initial source of the growth of the cancer, which I cannot prove. A sufficient number of cases is, however, on record, where cancer has started in pure connective-tissue formations, entirely devoid of epithelial structure, such as the medulla of the bone, the pleura, the peritoneum, or lymph ganglia; and cancer has occasionally been found in the substances of the brain, independent of the epithelia of the ventricles. Cohnheim's hypothesis that embryonal epithelial germs may have been spread in the connective tissue and caused the appearance of the cancer, is unfounded, it tries to explain one puzzle by another, and has been justly discarded by pathologists.

The humoral pathologists have held that cancer is an outcome of a constitutional disturbance, more especially a faulty state of the blood. This cannot be, because we find that almost uniformly only persons of good constitution will have cancer, more especially in advanced years, or after the thirtieth year of life. This patient had naturally a strong constitution, her father is now living at the age of eighty-nine years.

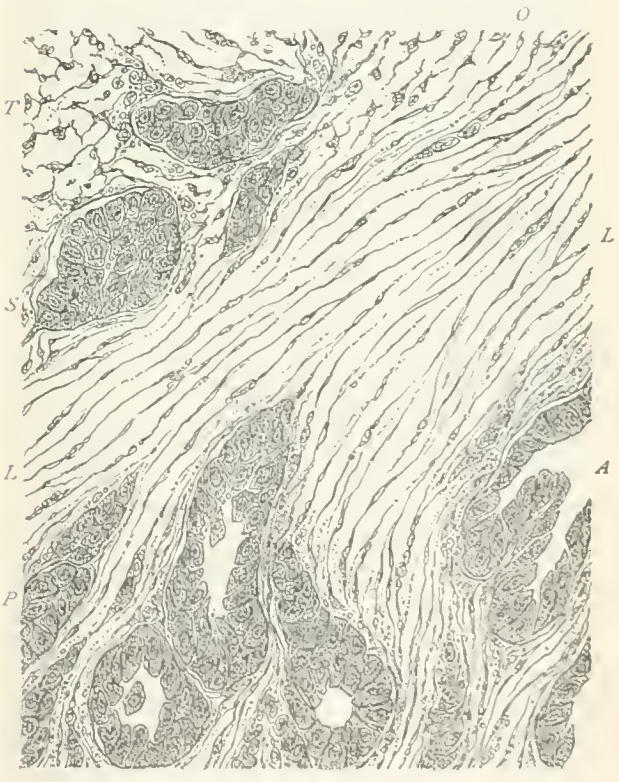

FIG. 1.—Carcinoma of Floor of Pelvis, Scirrhous and Adenoid Portion. × 200. *L, L*, longitudinal bundles of coarse fibrous connective tissue; *O*, oblique bundles; *T*, transverse bundles of coarse fibrous connective tissue; *S*, small nests of cancer epithelia, the scirrhous portion; *A*, gland-like formations of cancer epithelia, the adenoid portion.

The tumor, with the adjacent organs and tubes, was placed in a dilute solution of chromic acid until thoroughly hardened, and afterward sliced for the microscopical research. The main tumor exhibits three varieties of cancer, *i.e.*, scirrhous, adenoid, and medullary cancer. See Fig. 1.

The scirrhous portion appeared to be composed of an extremely dense and firm fibrous connective tissue, with

[1] In 1881, in St. Luke's Hospital, 2 cases of malignant tumor of the abdomen, 2 deaths. In New York State Woman's Hospital, in 1885, 2 cases of carcinoma of omentum, exploratory incision, death; carcinoma of ovary, ovariotomy, death. In 1886, 3 carcinomata of omentum, exploratory incision, all died; sarcoma, exploratory incision, death. In 1887, 2 cases of carcinomata of omentum, both died of shock after exploratory incision; carcinoma ovarii, ovariotomy, death; sarcoma ovarii, ovariotomy, death. In 1886, cancer of ovaries, exploratory incision, death.

[2] MEDICAL RECORD, January, 1887.

[3] She died thirteen months after the operation, a large secondary growth in the peritoneal cavity.

scanty nests of epithelia dispersed in it. The connective tissue is made up of coarse bundles distinctly interlacing, so much so that longitudinal sections of the bundles alternate with cross and oblique sections. It is mainly in the cross-sections that we meet with epithelial nests. In many places the protoplasmic bodies between the bundles, the so-called connective-tissue cells, are enlarged, or found in a state of active proliferation by a more or less pronounced outgrowth of living matter. In such places the splitting up of the protoplasmic bodies into rows and chains of nucleated, coarsely granular bodies, is plainly seen. Even in the scirrhous portion we not unfrequently meet with nests hollowed out in their centre, thereby showing a tendency to change into the adenoid variety. The epithelia of the nests are small, provided with distinct nuclei and nucleoli, and separated from one another by a light rim of cement substance traversed by delicate thread-like formations.

Close by we meet with the variety termed "adenoid," or gland-like. This form is conspicuous by epithelial nests hollowed out in their centre into more or less regular cavities typical of all glandular tissue. At the same time we notice a change in the form of the epithelia, which have become columnar, being attached with narrow feet to the surrounding layer of connective tissue, whereas their bases project toward the central calibre. In this way tubular formations are produced with manifold convolutions of the subjacent connective tissue as well as the lining epithelium. With high powers we can ascertain that many epithelia are enlarged and contain globular and

FIG. 2.—Carcinoma of Floor of Pelvis, Adenoid and Medullary Portion. × 200. *A*, adenoid or gland-like formations of cancer-epithelia: *M*, *M*, medullary portion of cancer; *I*, *I*, so-called small cellular or inflammatory infiltration of fibrous connective tissue; *F*, longitudinal bundles of coarse fibrous connective tissue; *N*, beginning formations of nests between the bundles.

irregular secondary formations in their interior which have been considered by pathologists as parasitic in nature. I hold the view of Virchow, that all these impacted formations are signs of active proliferation of the epithelia, the so-called "mother-cells," of old authors, tending toward a new formation of epithelia. The adenoid form of cancer is most frequently met with in the uterus and in the alimentary tract, although in this case I was unable to trace any connection of the cancerous tumor with either the uterus or the rectum.

The third variety of cancer observed in this tumor is the so-called medullary form, which pathologists justly consider the most malignant. See Fig. 2.

We see some scanty tubular formations of adenoid cancer blending with a portion characterized by an abundance of epithelial nests and comparatively little fibrous connective tissue between them. Both the scirrhous and adenoid forms have contributed to produce the medullary type. The nests, though peg-like in the vicinity of the tubules, have assumed rather irregular forms, in which even the single epithelia have, in many instances, lost their angular shape to such a degree that a large protoplasmic layer may appear with scattered nuclei and occasional demonstrations of single epithelia, which, however, under all circumstances, remain interconnected by means of delicate threads.

In the adjacent connective tissue we see an active proliferation, most pronounced in the medullary portion of

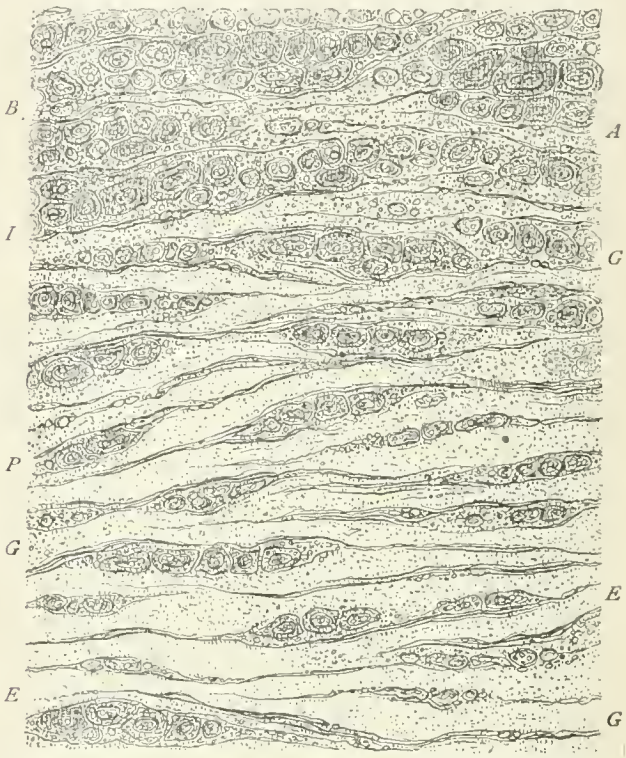

FIG. 3.—So-called Small Cellular or Inflammatory Infiltration of Fibrous Connective Tissue Near Cancer. × 600. *I*, *I*, Interstices between the bundles, enlarged, holding lumps of living matter; *B*, *B*, basis substance of bundles unchanged; *P*, Transformation of basis substance into protoplasm; *G*, *G*, globular bodies sprung both from the interstitial protoplasm and the bundles; *E*, *E*, angular cancer-epithelia, the products of globular bodies.

the tumor. There are numerous granules and globules scattered throughout the connective tissue. This infiltration has long since been known by the name of "small cellular infiltration of Virchow," or "inflammatory reaction" of Thiersch and Waldeyer. It is interesting to inquire what may be the origin and significance of this proliferation in the connective tissue adjacent to all cancer nests, more especially to the adenoid and medullary varieties. The image offered by the connective tissue closely resembles the inflammatory condition. See Fig. 3.

We know that every new-growth in the connective tissue first appears as a reduction to its medullary or embryonal condition, the same as takes place in ordinary inflammation. Both cancer and sarcoma, in their commencement, present appearances similar to inflammation. It is only the final result that will determine the nature of the exuberant growth of the connective tissue or the epithelium, whether it is simply an acute inflammatory disturbance or a malignant tumor, sarcoma, or carcinoma.

Around every growth we see this inflammatory reaction or infiltration. Virchow says: "If we examine any proliferating tumor of a cellular character, we find, three to five lines beyond its apparent limits, the tissue already in a state of disease and exhibiting the first traces of a new zone." [1]

[1] Cellular Pathology, p. 503.

When studying with high powers of the microscope this "inflammatory infiltration," I noticed that some of the inflammatory corpuscles were shaping themselves into cancer epithelia; the indifferent or medullary corpuscles were changing to large polyhedral epithelia, and forming cancer nests. This, so far as I know, had never before been observed or demonstrated, and it completely sustains what Dr. C. Heitzman asserted in 1883, that the so-called "small cellular infiltration" of the connective tissue was the "pre-stage of cancer."[1]

This view is of great practical importance. Whenever we see by the microscope this infiltration on the cut surface made by the surgeon, we can positively foretell a recurrence of the cancer in the given spot. We will always find "this zone is the chief source of local recurrences after extirpation."[2] In 1884, Dr. Paul Mundé[3] reported that after removing a uterus he gave it to Dr. C. Heitzman for microscopical examination; the latter noticed on a vestige of the vaginal wall this infiltration, and said, in his report: "Should my view be correct that this infiltration is a preliminary stage of cancer, no doubt recurrence will take place in your case within two years." The disease recurred in seven months. Virchow strictly holds to the view that in the fibrous connective tissue nothing else is capable of proliferation but the so-called cells. Since 1873 it has been shown that the fibrous basis substance has the same structure as protoplasm, and the living portion of this, arranged in the shape of a reticulum, is capable of proliferation just the same as the protoplasm itself.

This view necessarily upset all the assertions of the cellular pathologists to the effect that only cells proper are capable of proliferation. In 1880, S. Stricker, in Vienna, accepted these views, and quite recently P. Grawitz, of Griefswald, Germany, has corroborated them and has shown that the basis substance in morbid conditions may be transformed into protoplasmic bodies, for which he suggests the rather awkward title, "slumbering cells." He imagines that every fibre of the connective tissue is a cell, dormant as it were, until brought forth to light by an irritative process, either inflammatory or from the growth of a tumor.

Fig. 3 plainly shows the transformation of the basis substances into protoplasm. Both the free protoplasm between the bundles and the protoplasm of the basis substance grow and proliferate. We see rows of newly formed elements between the bundles, and the bundles themselves transformed into protoplasmic bodies, the final result being what pathologists term "inflammatory infiltration."

In the highest degree of this change only scanty spindle-shaped fibrilla are left between the groups of the embryonal or medullary corpuscles. At the same time we see that in the groups of medullary corpuscles numerous bodies had made their appearance characterized by an angular shape, by mutual flattening, and the appearance of large oblong nuclei; in short, bodies which offer all evidences of epithelia, although they had made their appearance, independently of previous cancer nests, in the midst of embryonal or medullary corpuscles sprung from previous fibrous connective tissue. This observation corroborates the view, first announced by Virchow, that cancer epithelia may originate from the cells of fibrous connective tissue, and also from the basis substance.

The microscopical analysis of both ovaries revealed still more remarkable facts serving to illustrate the manner in which cancer is spreading. The right ovary was found in the state of the reactive infiltration just described. This may have been the result of a mere oöphoritis, or of a beginning appearance of cancer. Since the right ovary contained several gyromata, and the inflammatory infiltration was most pronounced in the cortex of the ovary, and in the vicinity of the gyromata, I would consider part of this, at least, as subacute oöphoritis. Quite different were the features in the left ovary. See Fig. 4.

[1] Microscopical Morphology. [2] Cellular Pathology
[3] Gynecological Transactions, 1884.

Here we see already with low powers of the microscope peculiar tracts pervading the medullary portion near the hilum. These tracts show coarsely granular, irregular bodies clustered together in the shape of rows, exhibiting all the features of cancer nests. Higher powers of the microscope reveal the interesting facts that these rows of cancer nests are in the lymph-vessels, and that the lymph-vessels are dilated by, and are carrying the cancer epithelia. This proves, what has long been surmised, that cancer is conveyed to different and distant parts of the body by means of the lymphatics; but this is, so far as I know, the first time it has been seen, or the fact positively verified, though it has generally been supposed to be the case, because the lymph ganglia near a malignant growth are the first to be affected. The endothelial lining of lymph-vessels are most conspicuous in the dilated portions, where the cancer epithelia did not entirely fill the calibre. In the lymph-vessels the cancer epithelia have mostly lost their angular shape, being more or less rounded and coarsely granular, and showing a considerable increase of living matter toward an endogenous new formation.

FIG. 4.—Thrombosis of Lymph-vessels of Left Ovary with Cancer Epithelia. × 600. *C*, fibrous connective tissue of medulla of ovary near hilum; *M*, bundles of smooth muscle fibres; *L*, *L*, *L*, lymph-vessels with unchanged endothelial lining; *E*, *E*, cancer epithelia filling and extending the calibres of lymph-vessels; *K*, cancer epithelia whose nuclei show karyokinetic figures.

Some epithelia (*K*) show a karyokinetic change of the nuclei which leads to a division of the cancer epithelia. Besides these formations we meet with protoplasmic bodies mixed with epithelia not surpassing in size so-called lymph corpuscle, and between all these formations granules of varying sizes.

In Fig. 4 an entirely recent thrombus of the lymphatics is illustrated, which is proved by the fact that as yet no change has taken place in the walls of the lymphatics or in their endothelia. That such changes do occur, and give rise to secondary tissue-changes in the vicinity of the lymphatics, is proven by the study of other portions of the same specimen. See Fig. 5.

Here we notice peculiar changes of cancer epithelia, not only the indistinct karyokinetic change in some nuclei, but also a direct division of the epithelia into smaller pieces of protoplasm, known by the name of medullary or embryonal corpuscles. Whether the division is an indirect or direct one, the result is the same under all circumstances; it is the living matter of the protoplasm or

the epithelia stored up in the nuclei and the granules in the surrounding protoplasm that causes proliferation.

Along the border of the lymph-vessels we still recognize the endothelia, which likewise are in a beginning proliferation by the outgrowth of their living matter into, first, coarsely granular, afterward vacuolated, and at last nucleated and reticulated bodies, exactly as we see in an acute inflammatory process. In several places in the

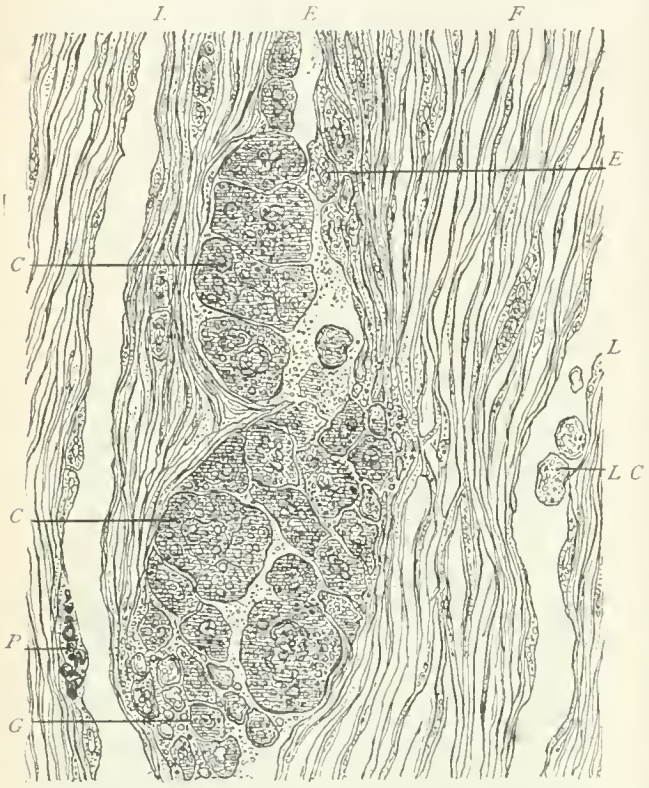

FIG. 5.—Cancerous Invasion of Connective Tissue from Cancer Epithelia Transported into Lymph-Vessels. × 600. *F*, fibrous connective tissue; *L*, *L*, lymph-vessels; *L*, *C*, lymph-corpuscles; *P*, pigment cluster from previous hemorrhage; *C*, *C*, cancer epithelia lying in lymph-vessels; *E*, *E*, endothelia of lymph-vessel in proliferation; *G*, outgrowth of living matter in endothelia and adjacent connective tissue.

specimen the wall of the lymph-vessel is completely lost by inflammatory changes of the adjacent fibrous connective tissue. Both the connective-tissue corpuscles and the basis substance have undergone proliferation, which may lead to the appearance of medullary or inflammatory corpuscles, changes which penetrate the environments of the lymph-vessels to a varying depth, and as stated before, to be considered the commencement or pre-stage of a cancerous growth. One of the endothelia of an apparently normal lymph-vessel is illustrated at *L*, *C*. It shows a cluster of red-brown pigment granules, due to a previous hemorrhage. In what relation this hemorrhage may have been to the cancerous growth, I am unable to say.

It will be understood that the thrombosis of cancer epithelia is only in real lymph-vessels lined by endothelia, and never in the so-called juice-canals, which by Recklinghausen and his followers have been considered as the roots of the lymph-vessels, destitute of a wall proper. All researches since 1874 have proven the fallacy of this view, since the juice-canals are nothing but spaces filled with protoplasm and by no means in an open communication with lymph-vessels proper. Unquestionably we do succeed in driving colored liquids into the spaces filled with protoplasm, surrounded by a basis substance of more or less considerable resistance. By this procedure the protoplasm is compressed and pushed to the wall of the cavity, where we invariably find its vestiges. Neither has the silver method proven the existence of juice-canals, since the apparently empty spaces have always been shown to be filled with protoplasm by the stain with chloride of gold.

The highest powers of the microscope thoroughly convince the observer of the tissue changes occurring around a cancerous thrombus in a lymph-canal. See Fig. 6.

The illustrated spot is more advanced in such changes than those drawn in Fig. 5. We see some nuclei in karyokinetic changes. In many epithelia the nuclei are broken up into a number of irregular lumps of living matter. We see a division of some epithelia into smaller pieces of protoplasm, interconnected with some original epithelia by delicate threads. The lining endothelia of the distended lymph-vessels are changed everywhere, the changes consisting in an increase of the living matter of both the nucleus and the granules of the protoplasm. At the same time the adjacent connective tissue exhibits beautiful figures of proliferation from a small, just perceptible, granule into a solid, later a vacuoled, and at last nucleated mass of living matter, the last form being that usually described by the authors "protoplasm" or "cells." The basis substance of the fibrous connective tissue has, to a large extent, been liquefied and transformed into protoplasm, so much so that only scanty spindle-shaped vestiges of such tissue are seen in the immediate vicinity of the lymph-vessels; whereas, some distance away, the beginning liquefaction of the basis substance is shown by the reappearance of living matter.

The peritoneal cover of the left tube is broadened, its blood-vessels dilated, and the cortex crowded with medullary or inflammatory corpuscles. In a few places I was able to trace an increase in the size of the medullary corpuscles to that of cancer epithelia, so much so that I must attribute the inflammatory infiltration of the peritoneum not to peritonitis proper, but to a beginning invasion of the peritoneum with cancer.

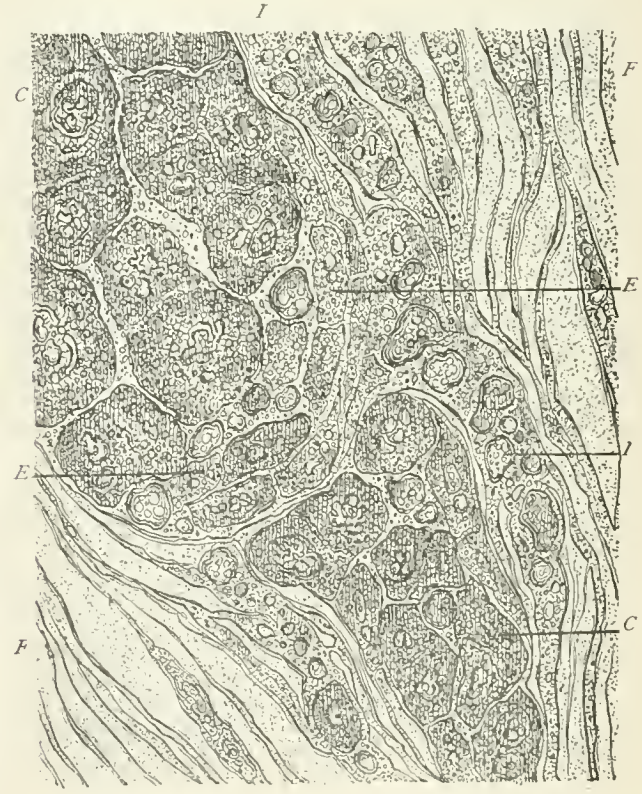

FIG. 6.—Tissue Changes around a Lymph-Vessel filled with Cancer Epithelia. × 1,000. *F*, *F*, fibrous connective tissue unchanged; *C*, *C*, cancer epithelia in a lymph-vessel, coarsely granular, undergoing divisions; *E*, *E*, endothelia lining the lymph vessel in active proliferation; *I*, *I*, proliferation of fibrous connective tissue environing the cancer thrombus.

My researches prove, beyond doubt, that the spreading of cancer from one organ, or from one tissue toward a neighboring one, is accomplished by the lymph-vessels—immaterial whether in a centrifugal or centripetal direction. For centuries physicians and pathologists have been aware of the fact that the organs first affected by secondary cancerous growth are the lymph-ganglia in the neighborhood. It was a logical inference to conclude that the lymphatics were instrumental in conveying the poison of

the cancer. It remained unsettled up to date whether the infection of the lymph ganglia was affected by the so-called cancer juice or by constitutent elements of the cancerous growth.

No observation, as far as I am aware, has ever been made to corroborate the hypothesis of the pathologist. My studies have revealed the fact that the lymph vessels carry the cancer poison not only to the neighboring lymph ganglia, therefore, centrifugally, but into an organ which has no lymph ganglia, only lymph-vessels, as the ovary. The specimen shows plainly that the poison is the cancer epithelia which are transmitted into the lymphatics, causing thrombosis of the lymphatics and infection around them. Whether or not the poison is lodged in parasitic organisms within the cancer epithelia I am unable to say. All attempts to prove the existence of such parasites have thus far proven to be a failure.

Professor Dr. P. Foa, in his article, "Ueber die Krebsparasiten,"[1] depicts star-shaped figures as parasitic organisms. These star-shaped figures are the reticulum in the protoplasm, described by Dr. C. Heitzman twenty years ago. Dr. J. Sawtscenko, in "Weitere Untersuchungen über schmarotzende Sporozoen, in den Krebsgeschwülsten," represents the same as micro-organisms.

Sir James Paget says: "I believe that micro-parasites, or substances produced by them, will some day be found in essential relation with cancers and cancerous diseases."[2]

F. A. Purcell remarks:[3] "Cancer-cells show amœboid movements, and can thus travel independently in tissue spaces, or even penetrate delicate membranes, so that the cancer germs may thus travel by their own power, or be carried along in the vascular systems or connective-tissue spaces in every possible direction."

But as yet none of these suppositions have been demonstrated. John Marshall, F.R.S., speaks of "the acid juices of cancer, and the mode in which they penetrate into the vacuities of living tissue;" adding, "the elements must pass into the intervals between the surrounding tissue, they must go into the lymphatics, they must reach the lymphatic glands. The proof of this is that the lymphatic glands in the neighborhood are always the first to be infected."[4]

Reed, of Cincinnati, observes: "The disease must advance either by the continuous invasion of adjacent normal tissue or by migration of cell elements either through the lymphatics or hemic circulations."

Virchow says: "I have come to the conclusion, the only one I think the facts warrant, that the infection is directly transferred by the means of the morbid juices from the original seat of the disease to the anastomosing elements in the neighborhood without the intervention of the vessels and nerves. The nerves are, indeed, often the best conductors for the propagation of contagious new formations, not as nerves, but as parts with soft interstitial tissue. An ichorous juice may pass from a cancerous tumor through the lungs without producing any change in them, and get at a very remote point, as for example in the liver, or a very distant part, and excite change of a malignant nature."[5]

Dr. George F. Shrady's statement, in his above-mentioned article, is nearer the truth, is, indeed, the exact fact. He says: "We know the cells are the cause of infection. Cancer progresses by a transport of its proliferating cells into neighboring parts."[6]

Another late authority, G. Sims Woodhead, says: "I shall not attempt to enter into any discussion as to the relative frequency of the spread of cancer by blood-vessels and by lymphatics, although lately some doubt has been thrown on the accuracy of our present teaching in regard to this question. I will merely state that I am more and more convinced that cancer exists almost entirely in the lymphatic vessel."[7]

Recklinghausen, in his article "Ueber die venöse Embolie und den retrograden Transport in den Venen und in den Lymphgefässen," observes: "Our attention was called to the circumstance that white cords of the thickness of a feather were on the surface of the right lung, which cords, on account of their form and arrangements, could not be anything else than thickened subpleural lymphatic vessels filled with sarcoma mass."[1]

We notice Recklinghausen simply infers this. In all the authorities I have been able to consult I find it nowhere stated that the lymphatics have been seen carrying the cancer epithelia, and forming in distant spots centres of infection or new cancer nests.

[1] Centralblatt fur Bakteriologie und Parasitenkunde. Band xii., 1892.
[2] Morton Lecture, 1887.
[3] Purcell on Cancer.
[4] Morton Lecture, 1889.
[5] Cellular Pathology.
[6] MEDICAL RECORD, 1887.
[7] British Medical Journal, May 7, 1892.

PULMONARY INFLAMMATION AS A COMPLICATION OF REMITTENT FEVER.[2]

By D. E. ENGLISH, M.D.,

MILLBURN, N. J.

Of many diseases there seem to be two forms: a false and a true. The true form is associated with the life and development of some particular microbe, is self-limited, and has a regular course. The false form at the beginning and throughout a part of its course simulates in clinical history and physical signs the true form so closely, as at times to deceive even the elect, but later a great difference becomes apparent. Thus there is an enteric fever so like typhoid for the first week or ten days that the physician is sure of his diagnosis and has informed the family, if not the patient, of the nature of the disease, has prepared them for a fever of four weeks' duration, and warned them of the danger of intestinal perforation, when, to everybody's surprise and the doctor's great disgust, the patient gets well at the end of the second week.

Again, there are membranous inflammations of the tonsils or pharynx which for a time are not to be distinguished from true diphtheria, and which often get the name "diphtheritic sore throat," but they get well in forty-eight hours under the influence of a purge and a little aconite or quinine.

There are some cases of diarrhœa and dysentery which get well promptly on astringents, intestinal antiseptics, and irrigation; other cases will not respond to these forms of treatment, but will quickly subside under large doses of quinine.

Some patients who have hyaline casts and albumin in the urine are quickly cured by quinine, while others are never benefited by any form of treatment.

Many of these false forms of disease are caused by malarial poisoning. *Malarial poisoning can cause any morbid condition that can be caused by acute or chronic, active or passive, congestion of the internal organs.*

Sometimes at the end of the first or the beginning of the second week of a case of remittent fever that has not responded well to the usual treatment, we find our patient with a little higher temperature, a little sharper pulse, a little quickening of the respiration, a very slight occasional cough, and just a suggestion of difficulty in breathing. A careful examination of the chest reveals one or more spots of commencing inflammation in the lungs. This patient does not go on to have a true croupous pneumonia, but he does go on to have an inflammation of lung tissue occurring as a complication of remittent fever. It is an inflammation of the air-cells, bronchioles, and smallest bronchial tubes, with the production of fibrin and serum, and an increased secretion of mucus. If there is a production of pus it is not in sufficient amount to be apparent to the unaided eye in the expectoration, unless there is also present a coarser bronchitis. Being a simple inflammation, the result of congestion, it does not respect anatomical boundaries as inflammations due to specific poisons are prone to do, but affects the smallest bronchial tubes with their lining of ciliated columnar epithelium, as well as the air-cells and intra-lobular passages with

[1] Virchow: Archiv, vol. c.
[2] Abstract of a paper read before the Orange Mountain Medical Society, August 14, 1891.

their squamous epithelium. Consequently, it often has added to it a coarser bronchitis.

Neither is this inflammation bounded by the natural divisions of the lung, but may involve a small part only of one lobe, or parts of two or more lobes. The physical signs are similar to those of true croupous pneumonia, except that the dulness on percussion comes on more abruptly and is not so absolute as in true pneumonia, probably because the air-cell is not so completely filled, and the exudate is liquid. The subcrepitant râle can be heard, and sometimes the sounds of a coarser bronchitis. As a rule, the signs of fine bronchitis are heard only in the immediate neighborhood of the area of dulness. There may be, usually is, more than one dull spot.

Cough comes on early, but is at no time a distressing symptom unless there is considerable coarse bronchitis or congestion of the larynx.

Expectoration is not copious, and, where there is no coarse bronchitis, is very thin and transparent, almost like frothy water. The expectoration remains about the same in amount from the beginning to the end of the inflammation. Breathing is not markedly affected unless a large portion of the lung tissue is involved or pulmonary œdema supervenes.

The general symptoms are those of remittent fever, the temperature running higher than it otherwise would, and the remission not being so distinct as usual. The pulmonary inflammation subsides when the systemic disease has been brought under control.

The lung complication makes the prognosis much more serious than it would be otherwise. The fatal cases die with pulmonary œdema, the temperature running up very high just before the end.

Some patients will have more or less pulmonary congestion or inflammation with every attack of remittent fever, others will have many attacks without any lung complication. There is apparently no connection between this inflammation and a tuberculous family history.

While malarial poisoning is the primary cause, other causes which seem to determine the lungs as the seat of inflammation are, exposure to cold and dampness, alcoholism, previously existing disease of the lungs, and any occupation that irritates or overtaxes these organs.

This complication may be mistaken for true croupous pneumonia, lobular pneumonia, capillary bronchitis, simple congestion of the lung, and pulmonary œdema.

The points that distinguish it from true croupous pneumonia are as follows: It is not a separate self-limited disease having a regular course and ending by crisis; the area of inflammation is not exactly limited by the boundaries of the lobes; the dulness is not so absolute nor so sharply defined; the subcrepitant râle can be heard throughout its course, and, generally, even where the dulness is most pronounced; the crepitant râle is absent; the characteristic expectoration of croupous pneumonia is absent; there is very rarely any pleurisy; there is little or no filling up of the intercostal spaces.

In lobular pneumonia there will be bronchial râles and hard coughing, with thick, tenacious, opaque expectoration before there is any dulness or loss of vesicular murmur. I have never seen symptoms of lung trouble come on in that order in remittent fever.

In capillary bronchitis there is no dulness; the trouble is more evenly distributed over both lungs; there is more cough; more lividness; the expectoration is thick and opaque; the temperature does not get so high; and it is seldom met with in adults.

Simple congestion of the lungs gives rise to no other symptom than slightly accelerated respiration, and it is seldom possible to make such a diagnosis unless there is some pulmonary œdema, or unless it has become hypostatic pneumonia.

General pulmonary œdema, unless it is a part of a general dropsy, as in nephritis, or heart disease, is always the result of a pre-existing inflammation or severe congestion of the lungs. If the case is not seen until there is general pulmonary œdema it is impossible to know by the physical signs what variety of lung trouble preceded it. Sometimes the history will make the diagnosis clear.

If the patient recovers, the lungs are left in a condition favorable to the establishment of tuberculosis or chronic bronchitis.

This complication of remittent fever requires special treatment besides that directed toward the primary disease. The main indication is to relieve the lungs of their abnormal supply of blood. This can be accomplished in the following ways:

1. Stimulate the heart, especially the left heart, with digitalis, and so increase the amount of blood in the systemic vessels.

2. Congest the skin by giving alcohol internally, and by using rubefacients and dry cups. As rubefacients I am in the habit of using mustard to the feet and legs and turpentine on the chest.

3. Lessen the quantity of the circulating fluid by diaphoresis, diuresis, watery purges, wet cups, and venesection. The digitalis and alcohol will in most cases produce enough diuresis and sweating without recourse to more powerful and dangerous drugs. They may be aided by dry heat externally and large draughts of water (not too cold) internally. In strong patients pilocarpus may be indicated. For purgation, a large dose of calomel (gr. xx. to xxx.) should be given, followed by a saline cathartic, and later on by glycerine suppositories.

I have never found it necessary to use wet cups or venesection, but they would certainly seem to be indicated in robust patients when seen early.

In a number of cases of threatened pulmonary inflammation I have used ergot, with the result that the impending inflammation did not appear. How much the ergot had to do with this result I cannot say.

In conclusion I would like to state that I have received very much help in understanding the behavior of lung troubles and the action of medicines thereon from the writings of Dr. J. West Roosevelt, of New York.

THE OCCURRENCE AND SIGNIFICANCE OF UNILATERAL ALBUMINURIC RETINITIS.[1]

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The subject of the following paper was suggested to the writer by the study of a case which came under his observation about four months ago, and which was thought by him to be most probably one of unilateral Bright's retinitis. And it is admitted at the outset, in regard to the case, that it is difficult to confirm the diagnosis positively, except by exclusion. The most suggestive feature of the case to the writer was the retinal picture.

The case was as follows: Miss A——, aged twenty-two, was kindly referred to the writer by Dr. S——, of this city, for the correction of any refractive error which might be present. The headaches from which she had been suffering of late had suggested the possibility of there being some such refractive error present. Examination, November 14, 1891, showed the vision of the right eye to be normal ($\frac{20}{20}$); also with + id. sph. The ophthalmoscope revealed hyperopia of id., and a fundus which was perfectly normal, and which remained so as long as the patient was under observation. The vision of the left eye was $\frac{20}{200}$, and unimproved by any glass. The ophthalmoscope revealed what the writer regarded as a typical picture of Bright's retinitis, of which the following note was made at the time: "O. S., outlines of the disk somewhat indistinct, veins full, arteries somewhat smaller than normal; flaming white plaque accompanies the artery

[1] Read before the Section on Ophthalmology and Otology of the New York Academy of Medicine, March 21, 1892.

downward from the disk and toward the macula for a distance of two disk-breadths; stellate-arranged white spots about the macula, above, below, and toward the disk. A small hemorrhage just to the lower and inner side of the disk. Field contracted for white and colors." On inquiry of her physician the following history was obtained: "Patient had been taken ill October 25, 1891, previous to which time her health had been uninterruptedly good. First seen by himself October 27th, and for a while he thought he was going to have a case of typhoid fever. After a day or so, however, it was evident that he had to do with a case of perityphlitis. She was confined to her bed about ten days, and her temperature at times reached 103° F."

She had had no especial symptoms suggestive of an acute nephritis, although, of course, as not infrequently occurs, such symptoms may have been concealed by the febrile affection. The amount of urine was not noticeably changed, she did not micturate more frequently, she had no œdema, no pain in the back, no vomiting or nausea, no chill. She had suffered from some headache, which had continued after her recovery from the febrile disease. Examination of her urine, November 15, 1891 (such examination being suggested by the retinal picture), revealed the following: No albumin or casts, a few renal epithelial cells, and suspiciously low specific gravity, viz., 1.010. Now, in regard to the diagnosis of the condition, the writer is perfectly aware of the fact that there are several conditions which exceptionally give a picture resembling very closely the one we usually regard as characteristic of Bright's retinitis. Among these conditions are intra-cranial tumor, diabetes, syphilis, some of the anæmias, and leucocythæmia. Diabetes, leucocythæmia, and pernicious anæmia were readily excluded by careful examination, and the subsequent course of the case. The patient was hardly as anæmic as one would have expected after her acute illness. As for an intra-cranial growth, it may be said that there was never any symptom of such a growth, nor was there the degree of optic neuritis that we generally associate with that condition. In regard to syphilis, the young lady's social standing rendered the existence of syphilis improbable, there had never been, nor was there subsequently, any symptom of syphilis; but more conclusive than all was the fact that the condition disappeared without any specific treatment. These various possible causes were excluded by her physician, who is a careful clinician of large experience. She had noticed that the vision of the left eye had been impaired for about ten days before consulting the writer, although such impairment may have lasted longer without its being noticed. The most probable explanation of the retinal trouble to the writer was an acute nephritis, existing with the perityphlitis; and appropriate dietetic and therapeutic treatment was advised, and the patient was sent into the country. She was seen about a month subsequently, on December 18, 1891. Her physician reported that her general health had much improved; he had found nothing abnormal in her urine, but that the specific gravity had risen to 1.030. The vision of the left eye had risen from $\frac{2}{200}$ to $\frac{2}{20}$; the small hemorrhage at the edge of the disk had been absorbed, the flaming white plaque had almost disappeared, the outlines of the disk were more distinct, and the white spots about the macula had much diminished in number. The patient was seen again February 1 and March 7, 1892. Her general condition had continued to improve, repeated examination of her urine revealed nothing abnormal, and the specific gravity remained 1.020. Ophthalmoscopic examination, March 7th, reveals no abnormal appearance except one or two minute white spots above the macula, and one below it. With + id. (sph.), which corrects her hyperopia, her vision is $\frac{2}{30}$.

This subject of how much diagnostic value can be attached to what one might call "the typical picture of Bright's neuro-retinitis," *i.e.*, the general infiltration of the disk and retina, and the peculiarly stellate-arranged exudation in the region of the macula, is one of very great interest and importance. While it is certainly true that we more or less frequently, in other diseases, meet with cases presenting one or two of the above retinal peculiarities, no less true is it that seldom, if ever, are such cases met with presenting all the peculiarities of what we have called "the typical picture of Bright's retinitis." The writer is convinced that most observers of large experience, when they meet with such a picture, can, in the great majority of cases, make the diagnosis of Bright's disease from the retinal picture alone. Bull, in his revision of Soelberg Wells, sums the matter up fairly. He says: "Neither the general infiltration of the disk and retina, nor this peculiar exudation in the region of the macula, is pathognomonic of chronic renal disease, but where the two occur together, chronic desquamative nephritis is in the majority of cases the cause." And it was this typical picture, which was so pronounced in the above case, that assured the writer that he could scarcely be mistaken as to the cause, even though it was found in only one eye; even though there were so few other symptoms of any renal trouble.

This retinal condition is commonly designated as "albuminuric retinitis." The writer has used this term above, and yet he cannot but feel that Abadie,[1] Trousseau,[2] and many others are justified in their criticism of the term. They hold that, inasmuch as the retinal condition is so often met with in cases where careful examination, repeated for several months (in some cases up to the death of the patient), fails to detect the presence of even a trace of albumin in the urine, the term albuminuric retinitis does not properly define the affection, and should be given up. They suggest "Bright's retinitis," or "retinitis of renal disease," and it must be admitted that this name is more appropriate.

While there are not a few reported cases of the affection involving one eye only, it is not a little surprising with what unanimity most writers agree as to its being always found on both sides. Among others who either state such to be the case, or else do not refer to the possibility of its affecting only one eye, are Juler, Swanzy, Soelberg Wells, in English; Schweigger, Mauthner, Schmidt-Rimpler, and Fuchs, in German; and De Wecker, Abadie, Meyer, and Warlomont, in French. Galezowski[3] even goes so far as to say that one of the diagnostic features of the affection is its simultaneous existence in both eyes. Among the few who refer to the possibility of its occurring in only one eye are: Noyes, in his text-book; Bull, in his revision of Soelberg Wells; and Gowers, in his "Medical Ophthalmoscopy."

Most of those observers who have reported cases of the unilateral affection regard it as extremely rare. Leber (*vide infra*) says in his report of a case, that it was the only case he had ever seen, and he had then been practising ophthalmology at least fifteen years, much of the time as Von Graefe's assistant. Out of eighty-one cases Yvert had seen it only once, affecting one eye alone. In a report of forty-three cases Schlesinger[4] had not seen it once.

In a somewhat careful search of the literature of the past twenty years, the writer has found reported the following cases of unilateral Bright's retinitis:

Kersch[5] reports a case in 1870, but not very accurately. Leber's[6] case, referred to above, is as follows: The ophthalmoscopic appearances were not very characteristic, consisting of a slight papillo-retinitis, veins somewhat full, arteries small, and a few small hemorrhages near the papilla. In addition, there was an unusual ring-shaped defect in the visual field, for which no cause could be found ophthalmoscopically. No history of the renal affection is given.

In 1874, Magnus[7] describes two cases, both of which

[1] L'Union Médicale, October 15, 1892.
[2] Gaz. Hebd., 1887, p. 82.
[3] L'Union Médicale, December 16, 1873.
[4] Inaugural Dissert.; Schöler and Uhthoff's Beiträge. Berlin, 1884.
[5] Memorabilien, 1870.
[6] Graefe and Saemisch, vol. v., p. 584.
[7] Klin. Monatsbl. f. Augenh., 1874, p. 171.

were observed for a short time only, the conspicuous features of which were neuritis and hemorrhages. The writer does not give fuller details of these cases, as they were under observation so short a time by Magnus.

In 1874, Plenk[1] reports a case of much interest, showing that sudden blindness can come on in Bright's disease, due not to uræmic attack, but to neuro-retinitis, and that too in one eye. The patient, female, aged forty-seven, suffering from Bright's disease, noticed, after several weeks of impairment of vision, suddenly a cloud before the right eye. Examination showed no perception of light in the right eye, and the ophthalmoscope revealed the usual appearance of Bright's retinitis, with very small arteries. The left eye showed no appreciable change. A certain amount of light perception returned, and it is said that in five days "light of an ordinary lamp was seen at ten feet."

Eales,[2] in 1880, reports 100 cases of cirrhotic kidney. Out of these 100 cases he found retinal trouble involving both eyes in 12 cases, and affecting one eye only in 16 cases. Such a proportion is certainly unusual, and it ought to be understood that in only one of these latter cases was more than one ophthalmoscopic examination made. Furthermore, in only one or two of them could the changes be said to be at all characteristic. In some they are reported to have consisted of one or two atrophic spots; in one, of a single small hemorrhage; and in others, of one or two small black spots. According to the description given by Eales himself, not more than one or two of them could be designated as retinitis.

In 1883,[3] Yvert reported a case of considerable interest. The patient, male, aged forty-three, suffered from chronic Bright's disease. The right eye was normal in every particular, and remained so up to the time of the death of the patient, two months later. The left eye showed the typical picture of Bright's retinitis, with white plaques, stellate-arranged white spots at the macula, and hemorrhages. Post-mortem examination revealed the interesting fact that there was only one kidney (the left, corresponding to the side of the affected eye), which was what is known as the large white kidney.

In 1884,[4] Brunet reported a case of much interest. The patient, a male, aged fifty-three, had all the symptoms of Bright's disease: œdema, urine coagulating solid on boiling, etc. The patient very early commenced to complain of visual disturbances in the right eye; another remarkable fact to which the patient first called the attention of the physician was the manifest predominance of the œdema on the right side, especially marked on the arm and leg. To discover whether this would be influenced by his position, the patient was directed to lie constantly on his left side. Yet the œdema remained as markedly predominant on the right side as before, showing that it was independent of the position in which the patient lay. The vision and fundus of the left eye remained normal. The fundus of the right eye showed the disk indistinct and the outlines obscure. Two irregular white plaques in the retina. It is stated that the patient could not recognize a watch held up at the foot of the bed. The patient was under observation four and a half months, and was finally discharged, cured. The condition of the right eye improved very much. In regard to the general œdema, it is stated that this persisted for some time on the right side after it had entirely disappeared on the left.

In 1885, Eales[5] reported the following case: The patient, a male, aged twenty-five, fell and injured the left side over the loins, and, as is distinctly stated, was injured nowhere else. The next day he had intense pain in the left loin, and cloudy vision of the left eye, which latter became steadily worse. He was seen by a competent ophthalmic surgeon twenty-four days afterward, and the following was noted: O. D., normal and remained so; O. S., neuro-retinitis of Bright's disease very marked. Vision = $\frac{2}{0}\frac{0}{0}$. Albumin in the urine. Under treatment appropriate to the supposed kidney trouble the general condition and that of the eye improved. When discharged, three months afterward, the albumin in the urine had disappeared, and the previously observed large white plaques in the retina had become reduced to minute glistening spots. Disk atrophic, vessels reduced to threads. Vision = $\frac{3}{6}\frac{0}{0}$.

Cheatham[1] reports a case which appears, from the history, to have occurred in acute Bright's disease. The vision of the left eye at first was $\frac{1}{\infty}$; this became $\frac{2}{4}\frac{0}{0}$ after six weeks of appropriate general treatment, with surprising improvement in the appearance of the fundus. The right eye remained normal throughout.

Moore's[2] case is almost unique in regard to the length of time it was under observation. The patient, male, aged sixty-seven, had albumin in the urine, hypertrophy of the left ventricle, and other well-marked symptoms of Bright's disease. After a cataract operation performed in March, 1884, both eyes were examined and the fundus of both was found to be normal. In September, 1885, the patient returned, on account of failing vision in the left eye, and the fundus showed all the well-marked appearances of Bright's retinitis. The right eye still remained normal. In December, 1885, three months afterward, the patient was seen again when the left eye (the one with Bright's retinitis) had all the symptoms of acute glaucoma, probably hemorrhagic. The right eye was still normal. Dr. Moore kindly informed the writer recently that the patient died about two years subsequently, and up to the time of his death the right eye remained normal: so that in this case one eye remained unaffected up to the death of the patient, two years and a half after Bright's retinitis had appeared in the other eye, and four years after the appearance of well-marked general symptoms of Bright's disease.

Weeks's[3] case was a man, aged forty. In August, 1884, he noticed various symptoms of Bright's disease, which became more and more marked. He was first seen by Dr. Weeks March, 1887. O. D., vision = $\frac{2}{2}\frac{0}{0}\frac{0}{0}$. Marked Bright's neuro-retinitis. Left eye normal. Vision = $\frac{2}{2}\frac{0}{0}$. The right eye subsequently became affected with hemorrhagic glaucoma, for which enucleation was performed by Dr. Knapp, July 1, 1887. The patient was observed up to the time of his death, nearly two years subsequently, as the writer was informed recently by Dr. Weeks. The left eye remained normal up to a very short time before the end, when a few small hemorrhages appeared. Thus one eye remained unaffected over two years after the trouble appeared in the other, and over four years after pronounced symptoms of Bright's disease were observed.

Bull[4] gives an analysis of 103 cases of exudative neuro-retinitis associated with chronic Bright's disease. In 93 cases both eyes were affected, either at the time of the first examination or during the subsequent observation of the patient.

At the time of the publication of Dr. Bull's article there were 10 cases (or about ten per cent.) in which the retinal affection remained unilateral.[5]

Such are, in brief, the histories of the various reported cases of one sided Bright's neuro-retinitis which the writer has been able to gather. They include (in addition to the cases of Dr. Bull, of which no histories are given, and in several of which the second eye became subsequently affected, and the sixteen cases of Eales, scarcely any of which, however, can be called Bright's retinitis), eleven cases by various other observers.

Now, is there any especial significance to be attached to

[1] Berichte des naturw. med. Vereins, v. Jahrg., Innsbruck Augenkl., 1874, p. 92.
[2] Birmingham Medical Review, January, 1880.
[3] Recueil d'Ophthal., 1883, p. 145.
[4] Jour. des Sc. med. de Lille, 1884, p. 313.
[5] Transactions of the Ophthalmological Society of the United Kingdom, 1885, p. 126.

[1] Journal of the American Medical Association, August 8, 1885.
[2] New York Medical Journal, April 17, 1886.
[3] Archives of Ophthalmology, 1888, No. 3.
[4] New York Medical Journal, July 31, 1886.
[5] Through the courtesy of Dr. Bull, it is learned that in several of these cases the second eye has become subsequently affected.

any of these cases? Does the fact that the neuro-retinitis is limited in some cases to one eye have any bearing on the etiology of the condition? In acute cases, as in acute Bright's disease, or in pregnancy, it is readily admitted that monocular neuro-retinitis might possess no especial significance. The renal condition might last only for a short time, and then might improve or pass away, attended with an improvement or disappearance of the retinal changes. Even in cases of chronic renal disease, where only one eye was involved, subsequent examination might reveal what the writer willingly acknowledges to be usually the case, viz., that the second eye had become involved; but there are certain cases of unilateral Bright's retinitis which are certainly suggestive in regard to the question of the etiology of the retinal changes. The usual causes assigned for these changes are one or more of the following: 1. Pathological changes in the blood. 2. Left cardiac hypertrophy and exalted arterial pressure. 3. Degeneration of the vascular walls. In considering our cases it is well to bear in mind with what rapidity the retinal changes may take place. The writer recalls a case, not at all unusual, which came under his observation. The patient, suffering from chronic Bright's disease, had been repeatedly examined for several months and nothing abnormal found in the fundus. A few days subsequent to such a negative examination, both eyes presented a typical picture of Bright's neuro-retinitis—hemorrhages, plaques, and white spots. Still more remarkable is the case reported by Hogg,[1] where one examination showed only a few white patches in the fundus. Two hours afterward, the fundus was seen to be thickly strewn with them. It is apparent, then, that if all the etiological conditions are present, the retinal changes can take place very quickly, even in a few days, or it may be, in a few hours.

It will be our task in the remaining time at our disposal to refer to Yvert's theory of nervous influence, and to develop it somewhat more completely, and see whether it receives any support from clinical or pathological observations. Yvert, it will be remembered, advanced the theory, based almost entirely on hypothetical considerations, that the sympathetic nervous system was an important factor in limiting the condition to one eye; that an irritation proceeding from some source is capable of reacting by means of the sympathetic nervous ganglia upon the whole capillary system of the corresponding side, thus causing disturbances of retinal circulation as well as in that of a limb. With this view in mind, in addition to the usually accepted causes, let us analyze at somewhat greater length some of the cases cited above, and see whether it will not more satisfactorily explain the conditions. The only cases supporting his theory of which Yvert was apparently cognizant were, besides his own case, the five of Potain.[2] The histories of these cases are not given with much completeness by Potain, but as far as they go they favor Yvert's theory. They were all cases where patients had suffered from a contusion over the lumbar region of one side, which was followed in all by anasarca, entirely limited to, or more pronounced on, the injured side; often also with hæmaturia, painful micturition, etc. Certainly such anasarca, even had it not been limited to one side, coming on so suddenly after an injury, would seem to be not satisfactorily explained by any or all of the above-mentioned causes usually given. But how much more inadequate becomes the explanation, and how much more necessary to call to our aid some vaso-motor disturbance, when the additional and remarkable fact is further noted that the anasarca was limited to, or more pronounced on one side. The next case bearing on the question is that of Brunet, cited above. The patient suffered from general œdema, much more marked on the right side independently of the side on which the patient sleeps. And furthermore, it is noted that the patient has Bright's retinitis in the right eye, while the left eye remains normal. Now, here we have general œdema and neuro-retinitis on the right side. Can we escape the admission that any explanation which does not take into consideration some vaso-motor disturbance does not satisfactorily account for the conditions as they are found? If blood or vascular changes are solely responsible for the condition, why should the left side escape? Then we come to the case of Eales. Here a man, who had previously had no visual disturbances, falls and injures himself over the left kidney, but receives injuries nowhere else. The next morning, besides the intense pain in the lumbar region, he notices the vision of the left eye (please note that the injury was over the left side) impaired, and Bright's retinitis is found, while the right eye remains normal. The patient was under observation four months, his general condition improved, and the albumin disappeared from his urine. There was no cardiac lesion. Eales thinks that the kidney trouble in this case was of traumatic origin and probably confined to one side, and that Yvert's view of irritation of the sympathetic most satisfactorily explains the condition. It is difficult to see how blood changes or vascular degeneration, unaided by some nervous influence—at least by some other factor—could take place in twelve hours to such an extent as to cause the condition of the retina as it was found.

Finally, we have the cases of Moore and Weeks. In the former, one eye remained unaffected two and a half years after the ophthalmoscope had revealed the characteristic changes in the other. In Weeks's case, one eye remained unaffected for nearly two years after the other was involved, a few small hemorrhages finally appearing (a short time before the death of the patient) in the previously unaffected eye. Now, in such cases as these last, do our ordinary theories as to the cause of the condition explain it satisfactorily? If blood changes, or vascular degeneration, or increase of arterial tension, one or all, occasion the retinal condition, can anyone give a good reason why one eye should go, two years or longer, exposed to just the same conditions as the other, and yet remain unaffected? That it should remain uninvolved a few weeks or possibly longer, even admitting only the above causes, might not be very remarkable. But that it should continue unaffected two and a half years would seem inexplicable if we did not consider that nervous or vaso-motor disturbances had considerable to do with the causation. Thus blood or vascular changes might operate ineffectually for an indefinite period. But if the ganglionic centres presiding over the organ became involved, trophic changes quickly take place, and possibly more extensively and quickly on account of the previously-existing abnormal condition of the blood and vessels. So much for the clinical facts. Now, let us see whether there is any pathological support for Yvert's idea. Da Costa and Longstreth[1] have published the results of their investigations on the state of the ganglionic centres in Bright's disease, and Da Costa[2] embodied the results of their further investigations in the Middleton Goldsmith Lecture of 1888. The writer is able to state that the subsequent observations of Dr. Da Costa have only confirmed the views of that able clinician as to the ganglionic changes in Bright's disease, especially in the contracted kidney. These observers found in the renal ganglia an increase of fibrous tissue, and atrophy of the ganglion cells, the latter appearing shrivelled or compressed. They consider that this lesion of the renal plexus exists constantly in Bright's disease, the histological changes being in some degree proportional to the amount and the duration of the kidney disease. In cases of marked hypertrophy of the heart, the cervical ganglia, particularly the inferior, giving off the inferior cardiac nerve, were examined, and a similar lesion was found. Particularly instructive in connection with some of the cases of œdema and renal trouble following injuries is a case described by Da Costa as follows: The patient fell and fractured the third, fourth, and fifth cervical vertebræ. The heart's action was frequent and full. Death a few hours afterward. The right heart was found dis-

[1] Lancet, 1873, p. 701. [2] Gaz. des Hôp., February 17, 1883.

[1] American Journal of the Medical Sciences, July, 1880.
[2] Medical News, May 5, 1888.

tended, the left ventricle firmly contracted, as is found in cases of cardiac hypertrophy with Bright's disease. Large clots were found pressing on the cervical ganglia, and the microscope revealed extravasated blood around the ganglion cells. Da Costa considered that the cardiac hypertrophy, as well as to a great extent the renal, vascular, and other changes, are the result of a common process which takes its origin in the ganglionic nervous system. Renal changes are to be traced to the renal ganglia, cardiac changes to the cardiac ganglia. Changes in the vessels and tissues of other organs of the body are probably affected by the ganglia which preside over them as centres. As to the exact way in which all this is produced, our knowledge of the sympathetic nerve-supply is not yet accurate enough to admit of absolute reasoning. But we know that disturbed nerve-power produces changes in structure by affecting its nutrition. It is only proper to say that identically the same lesion of the sympathetic ganglia has been found in Bright's disease by Saundby,[1] of Birmingham, who however does not agree with Da Costa's conclusions. Hale White,[2] of London, has also found a lesion of the splanchnic and semilunar ganglia in diabetes mellitus, which resembles but is not identically the same as found by Da Costa in Bright's disease. The influence of the sympathetic ganglia on trophic changes is often seen in other departments of medicine. A case of zoster of the forehead, reported by Wyss,[3] of Zurich, in which the conjunctiva and cornea of one eye were affected, and which terminated fatally, is interesting. All the filaments of the ophthalmic nerve—the first branch of the trigeminus—were inflamed, and the ophthalmic nerve back to the Gasserian ganglion was surrounded by blood-clots. The ganglion itself was soft, enlarged, infiltrated with pus-cells, and contained many extravasations, so that the ganglion cells were pushed far apart and partly destroyed. The trigeminus back of the ganglion was healthy.

The fact that one eye only is involved would be readily explained by supposing that the ganglion presiding as a centre over that eye is affected, while the corresponding one of the other side remains still unaffected. If these ganglia are once involved, as the result of an injury, trophic changes can quickly manifest themselves. The fact that neuro-retinitis appears within twelve hours after an injury, as occurred in Eales's case, quoted above, is no more remarkable than, for example, the fact that a large spot of herpes appears on the hand a day before each menstrual epoch, to disappear when menstruation ceases, as was true in a case narrated to the writer by one of the leading dermatologists of the city. In a case of chronic Bright's disease, where one eye remained unaffected a long time, the ganglion presiding over the other eye might finally become involved, and the retinal changes then take place quickly. No doubt the pathological changes in the blood and vessels have much, if not the most, to do with the changes ultimately; remaining, however, ineffective in the way of causing eye lesions until the presiding ganglia are involved. Then changes may show themselves very rapidly. It would be instructive, in a case where one eye had remained normal up to death while the other showed marked retinal changes, to subject the corresponding ganglia of each side to a careful microscopic study, and see whether differences would be found.

In regard to the conclusions from the above, the following may be affirmed:

1. According to the testimony of most observers, unilateral neuro-retinitis of Bright's disease, even where it remains unilateral for only a short time, is of rare occurrence. Cases which remain for months or years with only one eye involved are excessively rare.

2. Where the affection comes on in a few hours, as after an injury, or remains limited to one eye for months or years, as in chronic renal disease, the ordinarily accepted theories as to its causation seem inadequate. A satisfactory explanation of such cases seems difficult, if not impossible (at least to many), except by supposing nervous influences of some sort (probably ganglionic changes) to be also in operation, in addition to the usually accepted etiological factors.

[1] British Medical Journal, January 13, 1883
[2] Lancet, 1884, ii., p. 1093.
[3] Archiv f. Derm. u. Syph., 1872, p. 449.

Progress of Medical Science.

The Treatment of Empyema of the Antrum of Highmore.—Professor Chiara, of Vienna, reports twenty-eight cases of this affection, and formulates the following rules as to treatment: 1. In very rare cases empyema, due to alveolar periostitis, may be cured by extraction of the root of the offending tooth alone. 2. Continued irrigation of the nose may also effect considerable improvement. 3. Injections into the antrum, even if undertaken regularly and thoroughly, frequently do not bring about a cure, although, as a rule, some improvement. 4. In cases of recent suppuration resulting from alveolar periostitis, a few injections usually suffice to produce a cure. 5. In only one case was it found possible to successfully inject the ostrum maxillare in such manner that pus was discharged together with the injected fluid. 6. Systematic injections can be easily and conveniently made through the alveolar process; to make them through the lower nasal passage is a very laborious procedure, carried out by the patient only with great difficulty. 7. Insufflations of iodoform powder do not give positive results. 8. During all these various proceedings the antrum should be closed up toward the mouth. 9. The most reliable results are afforded by tamponing the antrum with iodoform gauze, which rapidly arrests suppuration. It should be practised only once a week; can be easily carried out by every physician, and shuts off the antrum from the mouth. 10. Preparatory to tamponing, an opening varying in size from four to six millimetres is usually made in an alveolus. The opening may be made in the canine fossa, but only if a perforation exists there already, or the patient refuses to sacrifice a tooth, or if it is desired to thoroughly curette the cavity. Tamponing through the canine fossa, however, is always a difficult and painful procedure.—*International Journal of Surgery.*

Aneurism and Hæmoptysis.—According to the experience of Dr. Hempelar, hæmoptysis in the course of aneurism may be independent of the aneurism, indirectly dependent on it, or due to perforation into the air-passages. Pulmonary infarction comes under the second heading, and the author says that tuberculosis not infrequently develops in the lung as a consequence of aneurism. He does not think that any pressure likely to be exerted on the pulmonary veins would produce such engorgement as to give rise to hemorrhage. Hæmoptysis due to arterio-sclerosis and interstitial nephritis also belongs here, as the aneurism and the vascular disease often own a common cause. Among 18 cases of aneurism recently observed, perforation into the air-passages occurred seven times. In one of these 7 cases there was no hæmoptysis, and in 2 there were infarcts. In the remaining 4 cases there was premonitory hemorrhage in 3. The hæmoptysis began in one case five weeks, in the second eight days, and in the third four months before death. In the first two cases there could be no doubt that the hæmoptysis was due to the perforation. Clinically, a slight hæmoptysis, lasting four months, as in the third case, could only be due to infarcts or new growth. There was no evidence, either during life or after death, of such lesions. The author says that continued hæmoptysis in aneurism would appear to be not very infrequently caused by perforation, and less often by infarcts, as in two of his cases. Thus hemorrhage from these aneurisms may be profuse and quickly ending in death, or continued, premonitory, and lasting days, weeks, months, or even possibly years, before death.—*Berliner klinische Wochenschrift.*

Pleural Effusion and Displacement of the Heart.—From a study on the above subject Dr. W. Langford Symes concludes as follows: 1. That displacement of the heart may occur as early as the fourth day; that a moderate effusion can produce it, and that it may be preceded and accompanied by fainting on exertion. 2. It occurs before protrusion of the intercostals, and the heart may even pulsate beyond the right nipple, while they are not affected. 3. Owing to the peculiar basic attachments of the heart, the apex can move in the arc of a circle, right or left; that the heart appears to rotate on its long axis; and that this rotation, in dexiocardia, may increase the distinctness of its sounds and impulse. 4. The heart does not return by the same route, but on a plane somewhat higher, and that this course, whether real or apparent, is dependent upon the non-expansion of the lung. 5. Extreme displacement may exist without either bruit or palpitation, and does not, *ipse facto*, necessitate paracentesis. 6. It is extremely dangerous for the patient to undergo any exertion when it is so displaced, owing to the many risks of sudden death. 7. Decubitus on the sound side, or in a semi-dorsal position inclined to that side, appears to lessen the tension of the fluid; that it is always a grave symptom, and an urgent indication for paracentesis, to relieve tension. 8. "Le bruit Skodique" is caused by the compression of healthy lung against the bronchus, thus acting as a better conductor of sound; that it is closely connected with high tension; and that it disappears when the intra-thoracic pressure falls. 9. The dangers of displacement being intimately connected with the condition of the opposite lung, the extent of dislocation, *per se*, forms no criterion, some slight displacements ending fatally, while other extreme ones are borne with impunity.—*The Dublin Journal of Medical Science.*

Nocturnal Infantile Cough.—Dr. Baginsky has pointed out that the origin of the periodic night-cough of infants is obscure. Without apparent cause the patient is awakened by violent cough, lasting from a quarter to half an hour. At the end of the paroxysm the child again goes to sleep and is well in the morning. Physical examination shows nothing abnormal. Such attacks have been ascribed to malaria, but this cause can often be excluded. The condition may be due to subacute or chronic rhino-pharyngitis or to a bronchial catarrh with hyperæsthesia of the mucous membrane of the respiratory tract, the accumulation of mucus during sleep causing irritation and thus inducing the paroxysm.—*Journal de Médecine et de Chirurgie pratique.*

Enteroptosis.—In an article on this subject Dr. Krez refers to Bartel's view with regard to the occurrence together of movable kidney and dilatation of the stomach (*The British Medical Journal*). If, owing to tight lacing, the kidney is pushed down the descending portion of the duodenum may be pressed upon and the outflow from the stomach made difficult. In one case recorded by Heller the duodenum was actually found to be dilated. Glénard was the first to point to prolapse of the various organs as a cause of nervous dyspepsia. The hepatic flexure of the colon, the transverse colon, and the stomach sink in position. It is said that enterostenosis may thus arise, and that by prolapse of the duodenum a kinking may take place. The frequent displacement of the kidney is only one link in the chain of these displaced organs, and prolapse of the uterus completes the condition. The diagnosis of enteroptosis is made by pressure on the hypogastrium upward and inward, when the symptoms are relieved. The author relates the case of a woman whose symptoms were referred to enteroptosis, and who died subsequently of tuberculosis. The stomach was dilated and displaced downward, and the transverse colon was situated three fingers' breadth below the navel. The hepatic flexure was on a level with the crista illi. Both kidneys, especially the right, were displaced. The right kidney could be brought forward toward the navel and put back into its place. The liver showed a constriction and was adherent to the diaphragm. The spleen was unaffected. The duodenum was not dilated. The displacement of these organs in the sense used by Glénard is not to be doubted. The author refers to five cases of enteroptosis and analyzes the symptoms present. He believes that the whole process is commenced by the sinking of the hepatic flexure of the colon as this has the loosest connections with the posterior abdominal wall. Of the causes of enteroptosis child-bearing is the most important, but others, such as tight lacing, rapid disappearance of fat, riding, dancing, etc., must be taken into account. The author refers also to hereditary predisposition. The treatment is chiefly by the hypogastric belt.

Comparative Researches on the Physiologieal Action of the Alkaline Metals and the Alkaline Earths.—The following are the conclusions to which Dr. Binet's researches have led him: 1. The more general action exerted by the salts of the alkaline metals and alkaline earths on the organism is loss of nervous excitability and muscular contractility. 2. This ultimate condition is preceded by respiratory and cardiac troubles, which may bring about rapid death, in advance of all other phenomena, especially in warm-blooded animals, among whom gastro-intestinal symptoms appear, vomiting, and diarrhœa. 3. In addition to this general property, the metals are distinguished among themselves by particular characters, which enable us to determine a relation between the physiological action and the chemical classification. 4. The natural group (lithium, sodium, potassium), distinguishes itself by arresting the heart in diastole; the group —calcium, strontium, barium—by the arrest of the heart in systole and tendency to contracture, which is marked in the use of barium. 5. Calcium especially distinguishes itself by the special action which it exerts upon the central nervous system, producing a state of torpor, with preservation of reflex excitability and of sensibility. 6. Magnesium inclines toward the first group by the arrest of the heart in diastole, but it separates itself from the rest of the metals by the remarkable paralysis of the peripheral nervous system which it determines. It is the motor paralyzer. 7. The metals can be arranged in the following order of decreasing intensities of poisoning power: lithium, potassium, barium, very poisonous; calcium and magnesium, much less poisonous; strontium, very little poisonous; sodium, almost harmless. The above is the order obtained by experiments on the frog. In mammalia the order is slightly different, on account of the predominance of cardiac and respiratory symptoms, among them barium is the most poisonous. 8. Contrary to the law of Rabuteau, there is no constant relation between the poisonous property and the atomic weight of these metals. The virulence of the metal may be better determined by taking count of the special tolerance for sodium by the organism, probably due to an hereditary adaptability to a salt medium, and by estimating the differences by which the metals approach or diverge from this condition.—*The Provincial Medical Journal.*

Factory Legislation in France.—The new French law relative to the employment of children and women in factories, etc., which was promulgated on November 2d, prohibits the employment of children in workshops, factories, mines, quarries, etc., unless they have received a certificate of physical fitness for the work from a medical man authorized to grant such certificates. The inspectors of labor can always demand to have children in such establishments, under the age of sixteen, medically examined, to determine whether the work they are called on to do is beyond their strength. A bill has also been introduced into the Chamber of Deputies which provides that no woman is to be allowed to work in a factory or workshop, or in the fields as an agricultural laborer, within four weeks of her confinement. In case of need, an allowance of one franc a day will be made during this period. Of this allowance, one-half will be provided by the state, and the other half by the department.

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SUGGESTIONS FOR THE ORGANIZATION OF A PUBLIC HEALTH SERVICE.

As we intimated last week, we shall notice briefly some of the various forms of organization of a public health service which have been submitted to Congress during the past twelve years. From this analysis those who are interested in the subject will be able to estimate intelligently what thought has been given to the subject, and be themselves better prepared to determine the value of any proposed plan, or to formulate a new organization. The first bill presented to Congress in the interests of the public health, now upward of twenty years ago, proposed to establish a "Bureau of Sanitary Science," having at its head a "Commissioner." He was reqnired to collect and distribute information relating to every possible condition affecting the health of the people. He had no executive duties, but was to occupy somewhat the position of the then Commissioners of Agriculture and of Education. The next bill was designed to create a Department of Health on the plan of the Department of Agriculture. The chief officer was to be called the Director-General of Health. He was required "to acquire and diffuse among the people of the United States useful information on subjects connected with the public health: to direct the establishment and management of efficient sanitary and quarantine systems and regulations throughout the several States and Territories of the United States; to supervise the Marine Hospital Service; and to organize and direct a corps of sanitary engineers competent to superintend all public works, so far as their construction may affect the public health." He was also "to prepare suitable tables for the taking of each census; the tables to embody such facts relating to births, deaths, marriages, the prevalence of disease, and such other data as will furnish a basis for securing a complete system of registration of vital statistics in the United States." He had power "to employ persons of proper scientific knowledge and skill to make special investigations on subjects connected with the public health." Another bill provided for a Bureau of Public Health in the Treasury Department, with a "Commissioner" at its head. He was to appoint, "with the advice and consent of the Senate, seven superintendents of external and internal quarantine, embracing both infected persons and infected or adulterated goods, for the following districts," to wit: 1. One for the Atlantic coast, from the port of Baltimore east. 2. One for the Atlantic coast, from Baltimore to Key West. 3. One for the coast from Key West, to and along the Mexican border, to the head-waters of the Rio del Norte. 4. One for the Pacific coast. 5. One for the coasts of the lakes and rivers of the northern boundary. 6. One for the inter-State travel and traffic of the States east of the Alleghany Mountains. 7. One for the inter-State travel and traffic of the States in the Mississippi Valley. In like manner he could appoint an Inspector of ventilation, draining, and plumbing of public buildings; also a Public Analyst. He was required—with the Surgeon-General of the Army, with the Surgeon-General of the Navy, with the Commissioner of Education, with the Surgeon-General of the Marine Hospital Service, and with the Commissioner of Agriculture—to prepare a code of regulations for the sanitation of their respective branches of service. Finally, with the President of the American Medical Association, he was required to prepare a code of regulations for the practice of physic, surgery, and midwifery in any Territory. When the regulations thus provided were approved by the Secretary of the respective departments, the Attorney-General, and the President, they were to have the force of laws. Another bill created a Bureau of Public Health in the Department of the Interior, presided over by a Commissioner of Health. His duties were chiefly limited to collecting and diffusing information in relation to the public health. The American Medical Association proposed to establish a Department of Public Health, with a Medical Secretary of Public Health. The duties were chiefly the collection of information, at home and abroad, relating to disease, and the tabulation of statistics. A more pretentious bill proposed a National Bureau of Health in the Treasury Department, to consist of a Sanitary Council composed of an executive commission and an advisory council. The Executive Commission was to consist of a Commissioner of Quarantine, a Commissioner of Internal Sanitation, a Commissioner of Vital Statistics—to be expert medical sanitary scientists. The Advisory Council was to consist of four members, viz., the Surgeon-Generals of the Army, Navy, and the Marine Hospital Service, and an officer of the Department of Justice. The members of the Executive Committee were to receive salaries, and be constantly on duty, under the rules, regulations, and instructions of the Sanitary Council, each devoted to his special branch of work. Another measure organized the Marine Hospital Service into a Bureau of Public Health, making the Supervising Surgeon-General the head, with a council of four commissioners appointed by the President.

The last method of organizing a public health service which we shall mention, and the only one which received the approval of Congress, was that creating a National Board of Health. The board was to consist of eleven members, as follows: seven appointed by the President, not more than one of whom should be from any one State, and one medical officer from each—the Army, the Navy, and the Marine Hospital Service—and an officer from the Department of Justice.

It will be noticed that the several measures for organizing a Bureau or Department of Health in our National Government, are divisible into two classes, viz.: 1, those which propose an organization having a single head, styled a Commissioner or a Secretary of Public

Health; and, 2, those which create a commission or a board composed of a number of members. These plans of organization have received a large amount of attention during the last twelve years, and have been repeatedly discussed in both branches of Congress. The latter form, or that creating a board with a diversified membership, has thus far had the preference.

DR. WILKS ON THE VALUE OF DRUGS.

We listen with attention when a physician of long experience and sound judgment gives his verdict on "The Value of Drugs." This is what Dr. Samuel Wilks does in *The Practitioner* for January, 1893. It is well known, he says, that some of the most successful physicians have won their position without giving much medicine. Sir William Gull was a notable case in point, and perhaps Dr. Wilks might be cited as another.

The majority of patients in ordinary practice can hardly be said to have a definite disease. There is a general disturbance of the whole machinery, as is the case with a man ailing from anxiety in business, a woman from domestic troubles, the young girl from causes touching the affections, etc.; they seek a doctor's advice and get a tonic or pepsin or ammonia or a bromide.

"Let me say," says Dr. Wilks, "as regards the latter drug, that a medicine of so universal application cannot be of much worth. I know of no disease in which I have not seen it given. Our true remedies, such as digitalis or iodide of potassium, have only a limited special power, but a drug like the bromide, excepting for its influence in epilepsy, must be considered but a poor and feeble remedy. It cannot be said that it has ever cured a disease. Its universal use is enough to characterize its impotence. I have never read the prescriptions of certain obstetric physicians without observing that bromide of potassium is an ingredient. It is a curious, but not a very exhilarating, exercise to look over one's note-books and observe the prime cause of the trouble for which the bromide was prescribed; if we do, we find something like the following under 'cause' of the complaint and 'remedy.' Worry in business—bromide of potassium; loss on the Stock Exchange—bromide of potassium; quarrel with the cook—bromide of potassium; loss of a pet dog—bromide of potassium; blighted affections—bromide of potassium; girlish love troubles—bromide of potassium; irritable step-mother and step-daughter—both bromide of potassium."

Dr. Wilks evidently does not consider bromide of potassium in any sense a "true and well-established remedy."

With regard to iodide of potassium, the writer naturally speaks more favorably, yet he is positive that the drug does no good in osseous diseases which are not syphilitic, though always administered in such cases. He has never met with a case of hypertrophied spleen which had not been treated by iodides, mercury, and quinine, yet these remedies never did any good.

There are altogether too many illustrations of the inefficacy of drugs, however, to make the subject interesting or novel. Dr. Wilks passes on, therefore, to cite some diseases in which drugs do have a curative influence. Among these is exophthalmic goitre, which is in certain instances arrested, if not cured, by belladonna. Half a grain of the extract may be given three times a day, with short intervals of rest.

Idiopathic or pernicious anæmia is a disease continually tending downward, but "very often absolutely cured by arsenic," a drug which Dr. Wilks thinks one of the most remarkable in the Pharmacopœia.

Tuberculous peritonitis is a disease which he considers curable in many cases by medical means. His patients had the general treatment of cases of phthisis—good living, milk, wine or beer, cod-liver oil and tonics, especially quinine. At the same time they had an active treatment as regards the abdomen—iodide of potassium with or without the quinine—and linimentum hydrargyri rubbed over the abdomen, followed often by the tincture of iodine. "Seeing the frequent occurrence of recovery, I cannot but think that herein the right method has been adopted."

The writer whom we are quoting has faith in drugs for chronic diarrhœa and dysentery, provided the proper ones are given and their use persistently continued. The ordinary astringents, such as chalk-mixture, catechu, sulphate of copper, etc., are unsatisfactory. The sheet anchor is mineral acid, ipecac, and small doses of opium. Patients are given first five grains of pulv. ipecac co. three times a day, and later nitro-muriatic acid, with a smaller amount of the Dover's powder or a compound ipecacuanha pill at bedtime.

Dr. Wilks refers to the utility of opium and digitalis, and concludes by insisting on practitioners selecting the remedies and sticking to them till their effect has been obtained or their inutility thoroughly demonstrated.

STRANGE INCIDENTS IN PRACTICE.

Sir William B. Dalby started a very fruitful topic when he contributed an article on the above subject to *The Lancet* of February 4th. There are very few doctors who do not have a good many weird experiences before their life's work is done, and a collection of such tales, well told and carefully edited (for even medical men sometimes have imagination in excess), would be most interesting.

Sir William's initial story relates to a case of nervous deafness, and is as follows: "Some years ago a lady was standing before her toilet-table, and, looking through an open door into her husband's dressing-room, saw in a mirror the reflection of her husband in the act of cutting his throat. From that moment she was absolutely deaf to all sound. A similarly sudden and complete loss of hearing some years later happened to a young married lady who was suddenly brought face to face with her dead husband, whom she believed to be quite well, and whom she was going to meet after a long absence."

Doubtless, the ophthalmologist could match these stories with cases of hysterical blindness, or "fright amblyopia," and the neurologist could report many cases of sudden hemianæsthesia affecting all the special senses.

Another curious incident related by Dr. Dalby was that of a middle-aged, healthy, and intelligent man who had lost his power of speech. His hearing was perfect, he could understand everything that was said to him, but he never spoke. The consultations were conducted on his part in writing, and he habitually carried about pencil and paper—in fact, writing was his only means of com-

munication. Dr. Dalby adds: "I found the ears healthy and the hearing normal. I could not get a satisfactory explanation of how he lost the power of speech, except that it occurred in boyhood. About a year after my interview with him he went again to see his physician, and, to the latter's astonishment, spoke like an ordinary person, saying that the power of speech had suddenly returned, adding that he was utterly unable to ascribe this return to any cause, any more than he was able to explain the sudden loss of speech—a simple inability to enunciate words to begin with, and next a sudden return of this power."

In the older French medical encyclopædias, a long department is devoted to rare and mysterious cases. We do not admit the existence now of cases that cannot be classified somewhere, yet, perhaps, if we were more modest, such a department might be established and well filled.

FURTHER INVESTIGATIONS REGARDING THE PARASITIC ORIGIN OF CANCER.

We have kept our readers informed of the extremely interesting and important investigations going on in France and England, regarding the parasitic origin of cancer. The facts showing that there are in the cells of cancerous tumors small parasitic bodies of the nature of protozoa, are continually accumulating. Dr. James Galloway has recently, in the Morton Lectures (*The Lancet*, February 4, 1893), reported the results of his studies of the life history of analogous organisms which occur in rabbits. He confirms the statements of Rauffer and others, to the effect that the peculiar protozoa of cancer are to be found in all the tumors which are properly examined. Regarding their significance he says:

"It will be gathered from what I have said that I have described these bodies with so much detail for the purpose of concentrating special attention on them, as being the only bodies yet found which show any probability of being parasitic. Their occurrence within the cell as a distinctly foreign substance; their appearance, so strongly suggestive of an organized structure, the staining reactions which they give, so distinct from those presented by the normal contents of cells; their great analogy in this latter respect, and especially in their behavior within the cell and possibly also external to it, to well-known species of sporozoa recognized as parasitic in animals—all point forcibly to the conclusion that these bodies, though not necessarily coccidia, are nevertheless protozoa, and are parasitic in cancerous epithelium."

A BUREAU OF PUBLIC BATHS.

A bill is now pending in the Assembly of this State which ought to receive the support of all physicians and hygienists of this city. The object of the act is to establish a bureau of public baths, in which shall be vested the care, management, and maintenance of the present floating baths, and of any other public baths to be hereafter established. The bureau is to be under the control and supervision of the Board of Health, and is to be in charge of a superintendent appointed by the mayor. This superintendent must be a practising physician, and will receive a salary of $3,000 per annum, a fairly liberal, though not extravagant, compensation for the discharge of duties which will be important, though probably not very onerous. It will be the duty of the superintendent to make the necessary regulations for the management and maintenance of the free public baths, cause statistics of such baths to be kept and compiled, and appoint and define the duties of his subordinates.

But the most important part of the bill is Section 4, which authorizes the mayor, aldermen, and commonalty of the city of New York "to construct and maintain six permanent hot and cold water baths in different parts of said city. Said baths shall be constructed on the plan of the rain-baths now in operation in Centre Market Place of said city, under the auspices of the Society for Improving the Condition of the Poor, or on such modification or improvement of said plan as the Board of Health may devise or suggest."

There can be no doubt concerning the advisability of providing free baths for the poor of this city, for the utility of such a measure has been well shown by the history of the "People's Baths" in Centre Market Place. At the time these were opened it was doubted by some whether the desire for cleanliness among the people was sufficient to cause them to patronize the baths to any extent. But during the first year, notwithstanding that there was a charge of five cents for each adult, or child over a certain age, there were no less than 61,226 bathers, of which number nearly fifty thousand were men and women. These evidently patronized the baths for the sake of cleansing themselves, and not for the mere fun of the thing, as the six thousand boys may have done. We must confess we should rather have seen the new baths established by the Society for Improving the Condition of the Poor, for it is hardly within the functions of government to wash the masses, if the cleansing process can be effected in any other way. Still, the education of the people up to habits of cleanliness is so important, from both a sanitary and a moral point of view, that we gladly welcome its extension, even though our ideas of the duties and limitations of popular government be somewhat shocked thereby.

THE SPHYGMOGRAPH IN COURT.

An incident showing the medico-legal value, or rather insignificance, of a sphygmographic tracing, occurred lately in Washington, D. C., in the progress of the Schneider lunacy inquisition, in which a number of eminent experts took part.

The commission for the prosecution having put in evidence a sphygmographic tracing of the defendant's pulse in order to show the influence of tobacco, which it was intimated had much to do with the alleged delusions, there was introduced by way of rebuttal a tracing by one of the experts for the defence, Dr. Irving C. Rosse, whose familiarity with instruments of precision was obtained by a somewhat extended use while on duty in the Army Medical Museum. On asking one of the commission whether the tracing in question was that of a man or of some lower order of animal, the reply was, "I don't know."

It was further asked, "Assuming the tracing to be

that of a man, does he or does he not smoke or use tobacco?"

To this the same reply was given, when Dr. Rosse stated that the tracing was one of his own pulse, and that he did not use tobacco.

In addition to this it was testified that, in the diagnosis of insanity, the sphygmograph is of no absolute significance; that it is a mere scientific toy, and that the results obtainable therefrom may be placed among the probabilities of science.

News of the Week.

On Immunization and Cure in Experimental Diphtheria of Animals.—The investigations of Behring and Wernicke, as well as those of Kitasato, the distinguished Japanese experimenter, have given results in artificial immunization that are of the utmost interest, as opening a new field, and as having established an accuracy and certainty of results comparable only, as to scientific demonstration, to those which we obtain in the production of experimental rabies. It was discovered that in certain animals diphtheria and tetanus could be cured by the application of tri-chloride of iodine without necessarily killing the bacteria, and that by this means they could also be rendered immune against further attacks of the diseases. This was thought, of course, to be due not to a bactericidal effect, but to a neutralizing power exerted against them. By a series of beautifully conducted experiments, they have reached a point at which they can produce serum of immunized animals possessing well-defined immunizing properties, and capable, for this reason, of being accurately dosed. They have recently experimented upon sheep, so as to obtain the serum in large quantities, and are about to make experiments upon man himself, which other investigators will pursue simultaneously, and which the medical world will await with the greatest interest.—*Therapeutical Review.*

The International Congress of Charities, Correction, and Philanthropy.—One of the series of International Congresses to be held in Chicago, in 1893, is to be devoted to the subjects of Charities, Correction, and Philanthropy, and the Fourth Section of this is to consider all matters relating to the Hospital Care of the Sick, The Training of Nurses, Dispensary Work, and First Aid to the Injured. The Committee of Organization of the Congress has appointed Dr. John S. Billings, Surgeon U. S. Army, as Chairman of this Section, and Dr. Henry M. Hurd, Superintendent of the Johns Hopkins Hospital in Baltimore, as its Secretary. Miss Isabel A. Hampton, Superintendent of the Training School for Nurses of the Johns Hopkins Hospital, has been appointed Chairman of that part of the work of the Section which relates to the training of nurses. This Section will hold five meetings, commencing June 12, 1893, and will also have charge of one of the general sessions of the Congress, viz., that held on the morning of June 14th. The following are suggested as subjects for special consideration in papers to be prepared: 1. Hospital Organization—Governing Bodies—Relations of the Medical Staff and of Nurses' Training Schools. 2. Hospital Finances—Means of Support—Mode of Keeping Accounts—Cost. 3. Plan and Construction of recently built General Hospitals, embodying the latest Improvements. 4. Relations of Hospitals to Increase of Knowledge, to Medical Education, and to the Medical Profession; Hospital Records, Statistics, and Reports. 5. Pay Patients in Hospitals. 6. Isolating Wards and Hospitals for Contagious Diseases. 7. Hospital Diets, Dietaries, Kitchens, etc. 8. Hospital Amphitheatres and Operating-rooms. 9. Hospital Laundries and Disinfecting Establishments. 10. Army and Navy Hospitals—Emergency Hospitals in Time of Epidemics—Temporary and Movable Hospitals. 11. Small and Special Hospitals, Cottage Hospitals, School Hospitals, Private Hospitals, Sanatoriums, etc.; Convalescent Hospitals, and What to Do with Incurables. 12. History and Present Condition of Hospitals in the Large Cities. 13. Training Schools for Nurses (see special circular). 14. Dispensaries—Relation to the Public and to the Medical Profession; Dispensary Records. 15. First Aid to the Injured; Associations for Best Means of Popular Instruction in, and its Place in General Education. Persons desiring to present papers, or to share in the discussions of this Section, are requested to communicate with the Secretary at once.

There will also be a sub-section on the Training of Nurses, which will hold three separate meetings. For these three meetings papers on subjects of special interest to nurses will be prepared and discussed. The following are suggested as subjects to select from: "Training Schools in England and America;" "Proper Organization of Training Schools;" "Nursing in Infirmaries and Almshouses;" "Nursing of the Insane;" "Obstetric Nursing;" "Nursing of Infectious Diseases;" "Nursing in Sanatoriums and Home Hospitals;" "Private Nursing;" "Nursing by Religious Orders;" "Work of Graduate Nurses." All communications relating to this portion of the work of the Section should be addressed to Miss Isabel A. Hampton, Chairman, the Johns Hopkins Hospital, Baltimore, Md.

A Governmental Commission on Neurasthenia.—Dr. Charles Chauvet, formerly *chef de clinique* in the Lyons Faculty of Medicine, has been sent by the French Government to Russia for the purpose of studying the frequency, the causes, and the treatment of neurasthenia. The late Dr. Beard should have lived to see this day.

The Sentiment Grows.—The proper method of dealing with all confirmed criminals of either sex is castration. It is humane to the criminal, and the best protective to decent society, and elevating in its moral tendency.—*Kansas Medical Journal.*

Two Epidemics of Cholera in Europe.—A few weeks ago Dr. Proust read a paper to the Academy of Medicine in Paris on the cholera epidemic of last year, in which he particularly dwelt upon the fact that there were two perfectly distinct epidemics of cholera, one of which broke out on April 4th in the overcrowded prison at Nanterre, close to the Seine, and ultimately spread to various parts of France, especially to the north and west, and the other coming from the east, which is alleged to have had its origin in the northwest provinces of India in March last, and to have gone *via* Kashmir, Afghanistan, Turkestan, and Persia into Russia, extending thence to the Baltic ports and ports of the North Sea and causing the epidemic at Hamburg, the ripples of which afterward touched our

own shores and those of America. We have long ago and on several previous occasions called attention to these facts and adverted to the interesting circumstance that Antwerp formed the point of confluence of the two epidemics—viz., that from the East and that from Paris. The disease was introduced into Antwerp by two ships arriving at the same time from Havre and Hamburg respectively. As Dr. Proust remarks, it will be interesting to note hereafter whether one or both of these epidemics will revive, and which will prove the more serious and break out in the greater number of places.—*Lancet.*

An Alleged Remedy for Diphtheria.—A recent number of a Berlin paper contained a communication to the effect that an apothecary's widow in Berlin possessed the secret of a sure remedy for diphtheria. In course of time persons of official position began to take an interest in the matter, which went so far that the sum of 100,000 marks was fixed upon as the price for the recipe. Just as the negotiations were about to be concluded, however, Dr. A. Krüche, head physician of the Physical Clinic, accidentally received a remnant of the medicine, in which was found a small piece of vegetable substance, which proved to be periwinkle, belonging to the dogbane family.—*Lancet.*

Of the Two Hundred and Ninety-eight Coroners in England only one-sixth are medical men.

Mr. Balfour, late leader of the House of Commons, is President of the London Society for Psychical Research.

Medical Women in Switzerland.—Although Zurich and other Swiss universities are graced by the presence of a considerable female element in their medical faculties, the female practitioner seems to find small scope for her professional abilities among the natives of that thrifty little commonwealth. The population of Switzerland is about three millions, and the number of medical practitioners ministering to their bodily needs in illness is 1,157. Of these only 10 are women.

The Value of Boiled Milk.—Dr. Drouet, in his work "De la Valeur et des Effets du Lait bouilli et du Lait cru dans l'Allaitement artificiel," which has been awarded the Prix de l'Hygiène de l'Enfance in the Academy of Medicine, summarizes his conclusions as follows: Although some children undoubtedly digest unboiled better than boiled milk, milk does not become less digestible by boiling. The nutritive properties of boiled milk are amply sufficient to nourish young children. Boiled milk keeps fresh a longer time than unboiled. Dr. Fayel considers boiled milk hurtful to children, and does not believe that the germs are destroyed by boiling. The tubercle bacillus is killed only at a temperature of 110° to 115° C. Experiments made at his laboratory at the Physiological Institute show that the degree of ebullition never exceeds 100° C. Dr. Fayel also says that tuberculosis does not increase infantile mortality. Children die from enteritis, and boiled milk, it is to be feared, might encourage this affection.—*British Medical Journal.*

Antiseptic Garments in Hospitals.—The Assistance Publique directs that an antiseptic blouse is to be worn in medical wards, surgical and lying-in wards, by each *chef-de-service*. The house-surgeons and dispensers, the dressers and students, can have one by paying a dollar The subordinates in hospitals must pay for the blouse, except in isolation wards; there the administration pays. The ordinary students are provided with a white aseptic blouse, and are strongly recommended to have clean hands.

Religious versus Lay Nurses in Portuguese Hospitals.—An ordinance has been passed by the Portuguese Government, without consultation with the hospital authorities, replacing the lay nurses in all "national" hospitals by Sisters of Charity. Both the medical and the administrative members of the hospital staff are said to be opposed to the proposed change.

Is the Peritoneum Sensitive?—This is the burning topic in English medical circles. Dr. Sherrington claims that it is not, and adduces in proof experiments on animals as well as clinical facts. Mr. Lawson Tait, replying for the anti-vivisectionists, states that it is, or, as he says later, that it sometimes is and sometimes is not. Experiments on animals and on the human body do not give us certainty. Perhaps American surgeons can help us in the present biological dilemma.

The Twelfth Congress for Internal Medicine.—The Twelfth Congress for Internal Medicine will meet at Wiesbaden from April 12th to 15th, Immermann, of Bâle, in the chair. On the 12th, Rumpf, of Hamburg, and Gaffky, of Giessen, will speak on "Cholera." On the 14th the subject of "Traumatic Neuroses" will be dealt with by Strümpell, of Erlangen, and Wernicke, of Breslau. The following papers are also announced: Ziemssen, of Munich, on "Parenchymatous Injections in Diseases of the Tonsils;" Emmerich, of Munich, on the "Preparation, Preservation, and Application of Immuntoxinprotein for the Cure of Infectious Diseases and Protective Inoculation against Them;" Adamkiewicz, of Cracow, on "Cancer and Its Treatment;" Jaksch, of Prague, on the "Chemistry of the Blood;" Meringe, of Halle, on the "Function of the Stomach."

The Harvard Veterinary School.—The report of the Dean of this school, contained in the annual report of the President of the University, states that: The school has now been ten years in existence. It began with gifts for immediate use amounting to $2,500, and has never received any more. It began with ten students and now has forty, notwithstanding the fact that it has constantly labored under the disadvantage of fighting the battle for a long curriculum against a well-established short one. It has a three-years' course, the largest corps of instructors, and the widest range of instruction of any English-speaking college.

Decrease of College Graduates Among Harvard Medical Students.—The Dean of Harvard College calls attention in his report to the diminution in the proportion of college-bred men who have entered the medical school since the year 1884, in which year the maximum of 53.9 per cent. was reached. Since that year there has been a steady diminution in this proportion, until in 1892 the ratio was only 28.2 per cent., a ratio which, with one exception, is less than any year since 1872. This diminution is true of graduates of colleges and scientific schools generally, as well as the holders of the Harvard A.B. degree. Dr. Bowditch, in commenting on these figures, says: "The cause of this relative diminution in the number of what must be regarded as the most desirable class of our students, is doubtless a complicated one, but among

the influences that have contributed to this result it is fair to assume that the increasing demands of our colleges upon the time of the under-graduates, and a growing conviction of the importance of beginning professional studies at an earlier age than that at which most students obtain the degree of A.B., have played an important part. This view derives confirmation from the fact that there is a large, and apparently an increasing, number of students in every entering class who have received a certain amount of collegiate education, but have left their colleges without taking a degree."

The "Staff of Life" is a broken reed, according to Professor Voit, who has found that dogs fed exclusively on bread become anæmic and dropsical, the amount of hæmoglobin being markedly diminished. Experiments of a similar nature made on rats give the same result.

The Medical Treatment of Acute Tonsillitis and Pharyngitis; A Comparative Study based on One Hundred and Sixty-nine Cases.—In conclusion of a long and interesting article in *The Journal of the American Medical Association*, p. 685, 1892, Dr. J. E. Newcomb, of New York, writes: "My views, therefore, in regard to the treatment of acute simple sore-throat of the varieties alluded to, may be summarized as follows: 1. I believe that in salol we have a remedy which, in the vast majority of cases, will give relief quicker than any other. Occasionally it utterly fails. Where it does so, I have found that iron tincture with potassic chlorate seems to be the best substitute. It is my conviction that this latter combination finds its best field in those patients who have already had many previous attacks, and in which there is more or less of an interstitial deposit of connective tissue in the mucous membrane. Salol is to most patients far more agreeable than sodium salicylate, and vastly more so than the nauseating guaiac. 2. If peri-amygdalar infiltration has already set in, it is an open question in every case as to whether we shall be able to prevent suppuration. An incision is, I believe, indicated wherever there is engorgement, even though no pus has yet formed. The latter rarely comes before the fourth day. If it is not found, no especial discomfort, then or thereafter, results to the patient from the incision, particularly if a little cocaine is used. The incision should be made where the pus is most likely to form, viz., high up, in front and above the pillars, far more commonly the anterior. 3. If pus is present, free incision toward the median line is indicated. It should be followed by a hot bicarbonate of soda gargle, together with poultices on the outside. 4. Care should be taken to thoroughly open the bowels with a mercurial and a saline at the commencement of treatment in any case."

Death of Dr. William C. Stone, of New York.—The following resolutions were adopted at a meeting of the Society of the Alumni of Bellevue Hospital, at a recent meeting:

Whereas it has pleased Almighty God to remove from his earthly sphere our worthy companion and professional brother, Dr. William C. Stone; therefore be it

Resolved, That the members of the Society of the Alumni of Bellevue Hospital express their sincere sorrow for the untimely loss of their friend and member, who was removed in the fulness of young manhood. A man of unusually impressive and dignified presence, with a manner of mingled firmness and gentleness, he commanded the respect and won the confidence of all with whom he came in contact.

Resolved, also, that these expressions of profound sympathy be extended to his family.

William B. Anderton,
Matthew D. Field,
William R. Pryor,
Committee.

French Surgical Congress.—The seventh annual meeting of this society will be held in Paris during the week beginning April 3d. The set subjects for discussion are "fibrous tumors of the uterus," and "the surgical treatment of tuberculous affections of the foot." The Congress will be opened under the presidency of Professor Lannelongue.

The Woman's Medical College of Pennsylvania has adopted a four-years' course of medical study.

The Nebraska State Medical Society will hold its annual meeting at Nebraska City, on May 16th, 17th, and 18th.

Law for Prevention of Blindness.—Dr. A. D. Sawyer, of Fort Fairfield, Me., writes: "In the Medical Record of June 18, 1892, is an article which states that the Rhode Island Legislature was the first of the New England States to pass a law for the prevention of blindness. The Maine Legislature in 1891 adopted such a law."

New By-laws of the Pan-American Medical Congress.—*Languages:* By-law IX. Papers may be read in any language, providing that authors of the same shall furnish the Secretary-General with an abstract, not exceeding six hundred words in length, in either of the official languages (English, Spanish, French, or Portuguese), by not later than July 10, 1893; and providing, further, that a copy of each such paper shall be furnished in either of the official languages, at or before the time of the meeting, to the Secretary of the Section before which the same shall be read. Remarks upon papers may be made in any language, providing that members making such remarks shall furnish a copy of the same in either of the official languages before the adjournment of the session. *Publication:* By-law X. All papers read, either in full or by title, shall be immediately submitted for publication in the Transactions (Special Regulation 3); but authors may retain copies and publish the same at their pleasure after the adjournment of the Congress. *Constituent Organizations:* By-law XI. All medical, dental, and pharmaceutical organizations, the titles of which have been transmitted with approval to the Committee on Organization, or which may hereafter be transmitted with approval to the Executive Committee by any member of the International Executive Committee, each for his own country, shall be subject to election by the Executive Committee, approved by the President, as constituent bodies of the First Pan-American Medical Congress; and each organization thus constituted shall have the right to designate as delegates all of its members attending the Congress; but no such organization shall meet at the time and place of meeting of the Congress as a distinct body; providing, that the secretary of each such constituent body shall furnish a list of officers and a statement of the number of members of his respective organization to the Secretary-

General, not later than sixty days before the meeting of the Congress, and shall forward a list of delegates chosen to reach the Secretary-General before the opening of the Congress.—By the Executive Committee, February 22, 1893.

Pay and Emoluments of Medical Officers of the United States Army.—To each rank is attached a fixed annual salary, which is received in monthly payments, and this is increased by ten per cent. for each period of five years' service until a maximum of forty per cent. is reached. An Assistant Surgeon with the rank of first lieutenant mounted receives $1,600 per annum, or $133.33 monthly. At the end of five years he is promoted to captain and receives $2,000 a year, which, with the increase of ten per cent. for five years' service, is $2,200, or $183.33 per month. After ten years' service he receives $2,400, after fifteen years $2,600, and, if he remain a captain, after twenty years $2,800 per year. The pay attached to the rank of major is $2,500 a year, which, with ten per cent. added for each five years' service, becomes $3,250 after fifteen years, and $3,500 after twenty years. The monthly pay of lieutenant-colonel, colonel, and brigadier-general is $333.33, $375, and $458.33 respectively. Officers, in addition to their pay proper, are furnished with a liberal allowance of quarters according to rank, either in kind or, where no suitable government building is available, by commutation. When travelling on duty an officer receives four cents per mile and reimbursement of money actually expended for railroad or other fares. On change of station he is entitled to transportation for professional books and papers and a reasonable amount of baggage at Government expense. Mounted officers, including all officers of the Medical Corps, are provided with forage, stabling, and transportation for horses owned and actually kept by them, not exceeding two for all ranks below a brigadier. Groceries and other articles may be purchased from the Commissary, and fuel from the Quartermaster's Department, at about wholesale cost price. Books and instruments are supplied in abundance for the use of medical officers in the performance of their duties. Leave of absence on full pay is allowed at the rate of one month per year, and this, when not taken, may accumulate to a maximum of four months, which at the end of four years are then available as one continuous leave. Beyond this an officer may still be absent with permission on half pay. After a few years' service, leaves to visit centres of medical and surgical science for purposes of study is usually looked upon with favor, and like indulgences to travel abroad may be granted when the exigencies of the service permit. Absence from duty on account of sickness involves no loss of pay. Medical officers are entitled to the privilege of retirement at any time for disability incurred in the line of duty, or after forty years' service. On attaining the age of sixty-four they are placed upon the retired list by virtue of statutory provision. Retired officers receive three-fourths the amount of their pay proper at the time of retirement.

Medical Edueation in Franee.—There is an extensive system of unofficial free teaching in Paris by celebrated physicians and surgeons appointed to the hospitals, where they give regular clinics, supplemented in many instances by lectures in the hospital amphitheatres. Doctors Péan, Pozzi, Labbé and Lucas-Championniere are among the surgeons, Doctors Dujardin-Beaumetz, Jules Simon, Luys, Huchard, Lancereaux, among the physicians. Dr. Péan gave his farewell clinic at St. Louis this week; for, having reached the recognized age limit, he retires to give place to younger men. In his farewell address he ascribed his success to unremitting labor, and recommended that road to his class as the only certain one to succeed. Dr. Pozzi is one of the younger men, being about forty, and is looked up to as one who will probably win the reputation of the leading French gynecological surgeon. He has lately published a highly-praised work on this subject. The liberality of the government toward foreigners in educational matters—for the same policy is extended to students in science, letters, and the arts—may be due to the cosmopolitan character of Paris, in which regard it is unequalled; but the liberal ideas of its teachers, and the toleration and even encouragement they give to innovators, however severe they may be in their later judgments after investigation, are the evident result of their constant contact with the ever-changing world that surrounds them, and their consequent freedom from routine and prejudice. This toleration admits the serious consideration of many subjects at present believed to be beyond the realm of possibility. At a late meeting of the Académie des Sciences, Professor Moissan exhibited to his colleagues a number of microscopic specimens of diamonds, made by him from ordinary carbon, which he had crystallized by means of an electrical furnace invented by himself, and by which he claims to obtain a temperature of 3000° C.

That Paris is favored as a medical centre is evidenced in the statistics of last year, showing the Faculté de Paris to have had 9,215 students in attendance, as compared with 6,220 at Vienna and 5,527 at Berlin: and of those at Paris more than three-fifths were of foreign birth. The foreign student or practitioner coming to Paris to supplement or complete his studies, generally seeks some specialty, either of medicine, surgery, accouchement or some department of laboratory work. The whole resources of the Faculté de Paris, the hospitals and the numerous medical laboratories, and those of the Sorbonne, the Museum and the College of France, are open to him free of any and all charges, even for material consumed. For special researches in some of the laboratories, however, he must furnish his own microscope. It is safe to say that more than half of the professors and teachers speak English, and, with the number of English-speaking students that surround one, and the little French one soon acquires, there is no difficulty in pursuing the specialty selected. To the American coming for the first time to Paris to pursue any line of study or observation, the courtesy, politeness and kindly consideration accorded him at the public institutions by professors and assistants will certainly awaken an appreciation of these simple amenities that, after smoothing many difficulties and making his daily work agreeable, will leave an impress that will mark his visit as one of the pleasantest of his experience; for the professors desire and welcome visitors and students, and do all in their power to facilitate their work and render their visit profitable and pleasant.

Influenza.—Several cases of grip have made their appearance in New York and vicinity during the past fortnight.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 2, 1893.

D. B. St. John Roosa, M.D., President, in the Chair.

A New Method of Artificial Respiration in Asphyxia Neonatorum.—Dr. J. Harvie Dew read the paper (see p. 289).

Dr. George T. Harrison said he could fully corroborate the statements of Dr. Dew regarding the inestimable value of the method he had described for resuscitating the asphyxiated newly born. It fulfilled all three of the indications called for in these cases, namely, the removal of foreign substances from the air-passages, supplying air to the lungs, and awakening the dormant energy of the heart and general circulation. Some authors had said resort to aspiration was imperatively demanded for removal of mucus and foreign substances in the air-passages by catheterization, but in employing Dew's method he had not found this necessary. It was a safe method, whereas Schultze's had caused, according to reports, fracture of the clavicle, and even rupture of the liver and other injuries.

Further Endorsement.—Dr. Von Beverhout Thompson said that in 1871 he saw Dr. Dew employ this method, and the speaker had made use of it constantly since, and with the utmost satisfaction. It was striking for its simplicity, ease, and convenience to the operator, and effectiveness. He had seen a good many children saved by this method, which, treated by any other, would probably have been buried. It could also be employed on somewhat older children, as he had done successfully in a case of accidental opium asphyxia.

Simultaneous Discoveries?—Dr. Egbert H. Grandin had found other methods in many regards unsatisfactory, and had been much pleased with Dr. Dew's since it was described to him last spring by Dr. Dew himself. It had since then been employed in the New York Maternity and in the Infant Asylum altogether by the house-staff, who considered it the method *par excellence*. In cases not of venous congestion and asphyxia, but of the anæmic form of asphyxia, he would in addition make use of saline rectal injections, which he believed had first been recommended by Dr. Jacobi. He had found that evening an article in the Baltimore *Medical Journal*, 1870, by Dr. Harvey L. Byrd, of Baltimore, entitled, "A Speedy Manner of Resuscitation in Asphyxia Neonatorum," which was nearly identical with that of Dr. Dew's, and anticipating Dr. Dew's by one year. It seemed another instance of nearly simultaneous discovery.

Alternation of Methods.—Dr. William T. Lusk said that the past few weeks he had had opportunity to think over Dr. Dew's method, and had come to the conclusion that it possessed advantages over others heretofore employed. It should be remembered, however, that no two cases of asphyxia were exactly alike, and that a method suitable for one might not be as useful as some other method in a different case. There were different indications to be met, and for the removal of mucus and foreign substances from the air-passages he thought catheterization best. Then for the influence on the circulation the alternation of movements implied in the Schultze method was perhaps most successful. Carefully carried out, it should not cause injury. Formerly, in order to meet different indications, he alternated the Schultze with the Sylvester method, but now he was pretty sure he would use Dr. Dew's method instead of Sylvester's.

An Objection.—Dr. William E. Forest feared that in the face of such unanimous commendation of Dr. Dew's method, it might seem presumptuous in him to express the opinion that it was not a very good one. It had not been shown by it, he said, that one cubic inch of air could be thrown into the lungs. It should be borne in mind that in a child born asphyxiated, the lungs were absolutely collapsed, and no air could be got out of them until it had been put in. He held that in the steps taken by this method, to produce inspiration, the thorax was diminished rather than increased in size; the antero-posterior diameter was shortened, and while the diaphragm descended some, yet it was not in proportion. Chandler's experiments, referred to by the author, had been repeated by the speaker, and went to disprove the value of the method. The expiratory portion of the method, however, was admitted to be good. The speaker then described and emphasized the value of his own method, which has been published in the Medical Record.

Byrd's Method Different from Dew's.—Dr. J. Clifton Edgar said he had taught the method of Byrd for four or five years, and while the expiratory steps were practically the same as in the method described by Dr. Dew, yet the inspiratory portion was far less efficient; for Dr. Byrd simply let the baby lie with its back upon the palm of his hand, the head dropping back, no traction being made upon the feet or arms. The method described this evening was very valuable in cases where the child had made an inspiratory effort, but, as Dr. Forest had stated, was not efficient for respiration unless some air had entered the lungs. He thought Dr. Dew had neglected an important advantage of his method, which he had previously explained to him, namely, that it could be employed before the cord was cut where it was desired to save to the newly-born all blood possible.

Dr. Stewart said Schroeder's method, about which some doubt seemed to prevail, consisted simply in placing the babe first upon the left, then upon the right hand of the operator, alternating the dorsal and ventral postures. He thought it was valueless.

Dr. Ayers had used the method described by Dr. Dew for six or seven years, and had found it the only one that permitted of its practice with the infant's body under water, a very important fact, as it was necessary to maintain the heat of the body. It could be dipped alternately into cold and warm water, if desired.

Dr. W. A. Ewing sent a communication in which he said he had seen Dr. Dew practise his method more than twenty years ago; that he had himself practised it since and with success wherever success could be obtained with any method.

Dr. Joseph D. Bryant sent a communication, two of the concluding statements being: 1. That extension of the dorsal and cervical spine in the living or in the dead subject increases the capacity of the thorax, and therefore causes entrance of air into that cavity, other things being equal. 2. Flexion of the spine and the forcing of the abdominal contents against the diaphragm and thoracic viscera, diminishes the capacity of its space, and therefore causes expulsion of air through the trachea. The same movement, too, no doubt stimulates the action of the heart by the direct contact with it of unusual pressure agencies.

Dr. Dew said experience had contradicted Dr. Forest's theoretical objections. It should be remembered, however, that some infants could not be resuscitated by any method whatever.

Corporations for Doctoring.—We have the casualty insurance companies that obtain for their injured the best of service for a mere pittance, and usually for absolutely nothing. These companies are increasing their power and influence, to the financial detriment of the medical profession. Allied to these are the railroads, which obtain the best of medical and surgical skill for a mere song. Associated with these are the contract corporation doctors. If these were paid like corporation lawyers we would have no criticism to make from the financial standpoint. To protect their financial interests, corporations secure the highest priced lawyers: but to look after their injured employees they secure the lowest-priced doctor, or perhaps it were more correct to say the doctor who will do the work for the lowest price. Because many struggling doctors desire the same position, the price is generally low.—*American Lancet.*

Clinical Department.

DEATH FOLLOWING A CUT FROM A CANDY-KNIFE.

By E. B. R. and E. J. B.

F. W——, aged fifty-seven, born in Germany, employed in a candy-factory, while working in starch and sugar accidentally cut his hand with a candy-knife. The following day his hand became swollen and slightly painful. He did not seek medical aid until the third day, when he came under our observation at the North Star Dispensary. His case presented the following features: Hand and arm, as far as the elbow, greatly œdematous, the epidermis lifted in large bullæ, filled with a straw-colored serum. The epidermis being removed, the surface beneath was covered with a grayish-white substance, either an exudate or a coagulum, which was readily removed with a dull curette, exposing the corium, bleeding. The inner side of the arm showed evidence of lymphangitis, *i.e.*, superficial paravascular infiltration. The patient had no fever and complained of very little pain.

The parts were thoroughly disinfected and a wet bichloride dressing was put on. He returned the following day, with no improvement. The œdema and bullæ formation, with their concomitant exudate or coagulum, had extended over half the arm. There was coagulation necrosis of the tissues over the tendon-sheaths of the third and fourth fingers, evidently a continuation, deeper, of the peculiar exudate or coagulum under the uplifted epidermis. We continued the wet dressing.

Fifth day.—No improvement. The same dressing was continued.

Sixth day.—Condition about the same. The patient complains of feeling weak and nauseated. The conjunctivæ were tinged a light yellow, his complexion was muddy; there was apparent fluctuation on the back of the hand, and several incisions were made, but no pus was evacuated.

Seventh day.—The patient complains of feeling very weak, and says he had two bloody stools in the morning, and that he had vomited blood shortly after having taken a cup of coffee.

The process had extended to the shoulder, the arm was very œdematous and the fingers were cyanosed. The epidermis on the extensor side of his arm was raised in one large bulla, with the peculiar exudate beneath. From the knife wound there exuded a sero-sanguinolent fluid, but no pus. While his arm was being dressed he vomited twice, the vomited matter being blood coagula. Shortly afterward he fainted, and upon his restoration he vomited at least twenty-four ounces of partially fluid, partially coagulated blood. His condition was one of extreme collapse, the pulse at the wrist could not be felt. He was taken upstairs to a ward, where he died in syncope four hours later, during which time he vomited blood several times.

Next morning an autopsy was held, Drs. Fenger and Isham being present. The stomach and intestines were distended with fluid and coagulated blood. There was no discernible lesion in the œsophagus, stomach, or duodenum. The mucous membrane of the two latter was markedly congested. No aneurism of the aorta or its larger branches. The heart was fatty, the liver cirrhotic.

Dr. Fenger determined the man's condition to be one of pronounced sepsis, and the hemorrhage due to cirrhosis of the liver.

This case is remarkable for the vitality which the patient exhibited, coming, unattended, a distance of two miles to the dispensary, and also for the absence of fever at any time.

His previous history was good; he always enjoyed perfect health, and never had a symptom which pointed to the cirrhotic condition of the liver.

It is possible his compensatory circulation (through the deep epigastric and internal mammary veins) was not sufficient to overcome the passive congestion produced by the weakening of the heart's action, due to sepsis. Gelatine cultures from the serum, taken on different days, would not grow. This sepsis was not due to a pus microbe. This is the second case which has come under our observation in which a traumatism was followed by lymphangitis in a person working in starch and sugar.

The question is, "Is there a ferment in starch or sugar which will cause such a condition?"

DISLOCATION OF THE ELBOW, WITH FRACTURE OF THE RADIUS.

By J. C. QUICK, M.D.,

MUNCIE, IND.

Willie H——, aged four years and ten months, on the morning of January 29, 1893, was sitting on the footboard of the bed when his little brother kicked him and he fell off sideways hurting his right arm. I saw him about one hour after the fall, and upon examination under chloroform found the ulna dislocated backward and upward two inches; the radius was broken off just below the insertion of the biceps muscle and the head was torn loose from its articulation with the ulna and humerus. The arm was two inches shorter than its fellow. I reduced the dislocation of the ulna, drew down the upper fragment of the radius until I could get crepitation of the two fragments, and held it in position with a plaster-of-Paris bandage, the arm being flexed at an angle of ninety degrees and semiprone. On the third day the arm was swollen so badly that I removed the bandage and applied a new one without disturbing the arm. On examination after the swelling had subsided, I found that the ulna was in its normal position with all the movements of the arm perfect, but the fragment of the radius was lying across the lower end of the humerus and the upper end of the lower fragment was loose in the muscles. The function of the biceps muscle is completely in abeyance.

LAVAGE OF THE STOMACH.

Dr. Frederick F. C. Demarest, of Passaic, N. J., writes: "Having had occasion to use the usual apparatus, namely, a funnel attached by accessory tubing to a stomach-tube, in some cases of obstinate gastric dyspepsia, for the purpose of washing out the stomach, I have been impressed with the many inconveniences connected with this apparatus for the purpose. I have devised an affair which has been made for me by Messrs. Tiemann & Co., of New York, which has, both in my own hands and those of my patients, seemed to do away with most of the objections to the old funnel process. My apparatus consists of: 1. A rubber fountain having dependent from it about one foot of rubber tubing fitted with a hard-rubber cut-off, and terminating in a hard-rubber cylinder. 2. A hard-rubber tip of large calibre, fitted into a second, which is so made that the free end is much smaller than the first one, and is of such size as to be retained when inserted into the cylinder at the end of the fountain tubing. These tips are attached to the end of the tubing, which is used to lengthen the stomach-tube. I have found this combination does away with all the spilling of water, and also with the failure to siphon, with which all are familiar by the other arrangement, and it is entirely possible for the patient, without assistance, to use it, which latter is almost an impossibility with the funnel. I offer the idea to the profession for what it may be worth, with the hope that it may be of service to someone."

Practice in Australia.—It is said that the number of medical men in Barry, New South Wales, is steadily increasing, while the population of the place is on the decrease. A local paper inquires with some solicitude whether there is any relation of cause and effect between these two facts.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CONFERENCE ON CHOLERA PRECAUTIONS—RECENT WORK ON THE PATHOLOGY OF CANCER AND SARCOMA—THE QUESTION OF THEIR PARASITIC ORIGIN—THE CLINICAL ASPECTS OF CHRONIC ALBUMINURIA—ITS PROGNOSIS—THE VALUE OF DIET AND HYGIENE IN RETARDING ITS PROGRESS.

LONDON, February 25, 1893.

AN interesting and important conference of officers of our Port Sanitary Authorities was held last week at the Mansion House, under the auspices of the Lord Mayor. There was a numerous assembly of the representatives, and the views of men whose energy and ability were universally recognized last autumn, naturally command attention. They passed fifteen resolutions with so much unanimity that the Government and the Legislature will incur no little responsibility if they do not give careful consideration to the subject. At the dinner which followed, Sir Walter Foster gave a warning that the demand of the first resolution, for financial aid for Port Sanitation, would not easily be granted by the Government, and in the case of the large ports, which derive substantial benefit from the shipping that comes to them, it may fairly be urged that their expenses are not more onerous than those of inland and riparian localities. But the question assumes a different aspect in the case of small ports, which derive no advantage from their position: although manifestly to neglect precautions at such places would be to invite cholera to enter.

As the exclusion of the disease is the interest of the whole country, it may appear just and expedient to prevent the resources of such localities from being paralyzed by the cost of precautions that the whole kingdom expects to be taken.

The proposal to treat arrivals from infected ports in the same way as those having cases of cholera on board excited some discussion, and the difficulties of doing so are illustrated by the case of Dover, where some 200,000 persons land in the year after a brief trip of an hour and a half.

The inspection of such an army of travellers would involve enormous labor and cost, and, moreover, the work must be most unequally distributed in consequence of the varying time of the arrivals, which sometimes come in shoals, and at others in more moderate numbers. This is but one aspect of the many which are presented by the resolutions of the conference as to the steps which are demanded to prevent the access of cholera to our shores.

At the meeting of the Pathological Society on the 21st inst., Mr. J. Jackson Clarke opened a discussion with a paper entitled "A Critical Survey of Recent Work Bearing on the Pathology of Cancer and Sarcoma." There had been rumors that Mr. Jackson Clarke's work on this subject opened up most important points, but that it would have to meet the criticism of other workers, who could not altogether accept his conclusions. Mr. Clarke exhibited a number of drawings and microscopical specimens, and showed photographs of sections on the screen. There were sections of early scirrhus on the warm stage, containing plasmodia showing amœboid movement. This was considered to show infection by sporozoa, and other sections showed the intra-cellular and the sporing stages of psorosperms from a sarcoma.

Photographs of two sections of the psorospermial cysts of the ureter, previously described by the author, were shown on the screen; in one of these great numbers of psorosperms of different sizes and forms filled the cavity, and some were still within the epithelial cells; the other section was crowded with amœboid spores, the origin of which the author traced in a subdivision of large "ripe" psorosperms. Some of them had wandered into the connective tissue outside the cyst. Another photograph showed large cells lying near a cell-nest of a squamous epithelioma. Another showed a cell-nest in which the "ripe" psorosperms had divided into swarm-spores. Another showed spore formation in an intervascular area of a sarcoma. Here psorosperms could be seen dividing by karyokinesis into clusters of cells, and in other parts of the section they were subdivided into amœboid spores. Mr. Clarke said that no one who knew anything of the sporozoa could examine his sections of early scirrhus without recognizing the condition as due to them, and he declared himself as more than ever convinced that both cancer and sarcoma are caused by these parasites in the same sense that tubercle is caused by the bacillus. He laid great emphasis on the invasion of the connective tissue beyond the epithelial parts: in fact, it was this fact that emboldened him to consider the parasites the cause of the disease. The process in sarcoma was practically the same as in cancer, except that vascular connective tissue was infected instead of epithelial.

Dr. Galloway opened the discussion on this paper with some acute criticism, and in his turn exhibited on the screen the only bodies which he considered parasitic. He declared that, except the photographs of psorosperms in the ureter, none of Mr. Clarke's sections or photographs satisfied him that they were parasitic. He saw nothing which suggested to him the stages of reproduction as seen in the sporozoa of animals. The ordinary form of parasite observed in cancer he showed in a series or micro-photographs, and they appeared to him to be of an origin external to the cell. He would not dogmatically assert that these must be protozoa, but their parasitic nature seemed to him the most probable explanation. The debate was then adjourned.

At the Medical Society of London, on February 20th, Dr. Ralfe brought forward the subject of chronic albuminuria with reference to prognosis, dwelling chiefly on the clinical features presented. He observed that the gravity of the symptoms was regarded as much less in recent years, since it has been found that "functional" cases constitute from one-third to one-half of those detected, if the urine be systematically examined, not only in diseases, but in persons presumably healthy, as, *e.g.*, those proposing to insure their lives or enter the public services. Moreover, prognosis is more favorable on account of the early recognition of albuminuria arising from the first stage of kidney disease, before the organ is irreparably injured. Improved hygienic and dietetic conditions check its advance, and in acute forms prevent or retard its recurrence. Even in graver cases of renal disease the same treatment renders them less rapidly fatal than was until lately believed to be usual. In red granular kidney the onset was very insidious, and frequently the first alarm was caused by some grave symptom other than albuminuria, such as retinitis, dyspnœa, hemorrhages, paralyses, any of which diminished the chance of prolonging life. But when a case was detected earlier, diet and hygiene would afford hope of retarding the progress of the disease. In nephritis attacking patients who had suffered from syphilis, malaria, or plumbism, vascular degeneration usually occurred early, and after symptoms pointing to this occurrence, they seldom survived beyond eighteen months or two years. Other forms of albuminuria were considered, hemorrhagic, paroxysmal, etc. An absolute milk diet was recommended in acute and subacute nephritis, especially for the relief of dropsy; but in advanced cases it was not well borne, especially if there were vascular degeneration or uræmia present; he had even known uræmic convulsions follow the attempt to enforce this diet.

An interesting discussion followed, in which several speakers related cases illustrating more or less the points of Dr. Ralfe's paper. With regard to life assurance, there appeared to be considerable divergence in the views expressed.

It was also thought that the fact should be more generally recognized, that patients with chronic granular kidney are liable to attacks of hæmaturia.

DR. J. LEONARD CORNING'S SYSTEM OF LOCALIZING THE EFFECTS OF REMEDIES UPON THE BRAIN BY INTRA-NASAL MEDICATION AND COMPRESSION OF THE JUGULAR VEINS.

To the Editor of the Medical Record.

Sir: My attention has been called to a letter by Dr. John Woodman, published in the Medical Record of February 4, 1893, in which the writer is pleased to observe concerning Dr. J. Leonard Corning's paper on the "Localization of the Action of Remedies upon the Brain by Intra nasal Medication and Compression of the Jugular Veins," that "while containing valuable suggestions as to method of compression, I think is open to criticism."

The criticism which the doctor thus offers is largely grouped under two headings:

First, he thinks it wrong to suppose that the habit of cocaine and morphine addiction may not be contracted by intra-nasal exhibition.

To this I reply, that when the remedies are thus administered, without the previous information of the patient as to their nature, the prospect of forming a pernicious habit is practically *nil*. If this were not the case, the office of every rhinologist—where, as all physicians are aware, cocaine is sprayed without stint into the nasal cavity, both for surgical and medicinal purposes—would become the propagator of the cocaine habit. That the gentlemen who use, and rightly use, the drug in this way are responsible for a minimum of evil of this sort is perfectly well known, and the point requires no reinforcement at Dr. Corning's hands.

Secondly, the doctor thinks "it is unwise to use such remedies, temporary in character, in the treatment of chronic cerebral or nervous disease."

To this I would reply that even "temporary" relief, especially in "chronic cerebral or nervous disease," is a consummation "most devoutly to be wished;" and in making this assertion I am convinced that I but echo the consensus of opinion of the entire profession. Certainly, seventy-five per cent. of all medical efforts are of this "temporary" character, surgery alone being able to offer more permanently effective expedients. The number of so-called medical "specifics" known to the profession is so short, so limited, that I am surprised that any well-informed medical man should look for anything of the kind, least of all, in the management of "chronic cerebral" or "nervous" affections! The most we can do here is to do the best we can; and while we are doing so, it is beyond a doubt good practice to relieve painful or other crises, as they occur. Indeed a "cure," or something very like it, is often effected in this way.

Finally, the doctor thinks that "before an impression can be made upon the cerebral tissues, by means of the circulatory apparatus (that contained in the nasal cavity, which is in direct communication with the intra-cranial vessels), the medicine must first be carried to the heart and then sent out by the arterial circulation."

As well might we say, when atropine is injected into the conjunctival sac, that it must go first to the heart and thence to the brain through the arterial system, in order to produce its effects; instead of perceiving, as we must, that it finds its way into the cerebral parenchyma by way of the ophthalmic vein—through the instrumentality of endosmosis—as has been believed to be the case, and rightly so, for the last thirty or forty years.

That the lymphatic and vascular connections between the nasal and intra-cranial cavities are most intimate, has of course been demonstrated by the most searching anatomical inquiry. All well-informed practitioners are of course aware of this. But what is of vastly more importance is the fact that experimental evidence is at hand to prove, beyond doubt, that medicinal substances, and more especially powerful narcotic alkaloids, when instilled into the nasal cavity, may be absorbed and transported by this system of vessels within the skull. Here, by the ordinary processes of exosmosis, constantly going on, the medicinally impregnated blood may exert a powerful physiological (medicinal) impression upon the cerebral structures. The proof of this may be stated and grouped as follows:

1. Relatively small quantities of narcotic substances may be injected hypodermically, in regions remote from the head, such as the extremities, and fail to produce effects either physiological or remedial upon the cerebral apparatus. And yet, when the same remedy, in like quantity, is sprayed into the nasal cavity, the most pronounced effects may be observed to follow.

2. A narcotic alkaloid may be injected beneath the skin of one of the extremities, and in due course of time produce its characteristic effect upon the intra-cranial structures. The same substance may likewise be injected (sprayed) into the nose, with the result that physiological effects often follow much more speedily than when the agent is employed hypodermically.

3. The phenomena thus grouped under 1 and 2 are explainable in no other way except on the basis of 1, an immediate local absorption in the nasal cavity; 2, entrance of the impregnated blood or lymph into the cranial cavity; 3, and exit there (within the skull) by imbibition, exosmosis, etc., of a sufficient quantity to evoke physiological effects.

The blood-vessels are not to be conceived of as impermeable water-pipes; this would indeed be poor physiology! How great is the exosmosis through the walls of even a small vessel is shown by the fact that, when a local anæsthetic is injected by means of a fine hollow needle into one of the small veins, so plentiful in the extremities, not only the vein itself but a considerable district round about becomes anæsthetic. This, of course, can only be due to elaborate processes of imbibition or exosmosis; and precisely the same thing occurs within the skull as the sequence of intra-nasal medication.

Let it be also added that that little known phantom, "Reflex," so often invoked to explain the apparently occult, has no application here; for nerves which are anæsthetized, or rendered moribund in their action by narcotic substances, can no longer serve as the highways for impulses of the "reflex" order!

Finally, as a general practitioner, I am sure that I but voice the sentiments of the whole profession by expressing my appreciation of the brilliant, and in some respects remarkable, achievements, of Dr. Corning in the sphere of neuro-therapeutics—researches which in truth have procured him a well-deserved reputation on both sides of the Atlantic.

Respectfully yours,
F. Le Roy Satterlee, M.D.

MEDICAL INSTRUCTION IN VIENNA.

To the Editor of the Medical Record.

Sir: Many of your readers, no doubt, are familiar with this subject, but for those who contemplate studying in Vienna, the following I trust will be of service.

The best time to arrive is September, this being the time the "semester" begins. Practically the work is divided into two divisions, the instruction derived from the general clinics, and that from the private courses. The general clinics are given at the krankenhauses; these are attended mostly by the medical students of the university, but some are well attended by American physicians, especially Professor Kaposi's, on skin diseases, from 8 to 10 A.M., Professor Nothnagel's, on internal medicine, and Professor Albert's, on surgery.

The private courses are given by the first and second assistants of the various professors, each course lasting from four to six weeks. Some are held every day, and last for an hour and a half; others are only two or three times a week, these generally last two hours or longer. They are all advertised at the various entrances of the "allgemeinen krankenhauses." Some can be entered at any

time, while for others, which are more sought after by Americans, it is necessary to wait for some weeks, especially those given by Drs. Kraus and Kovacs, who were assistants to the late Professor Kahler, whose loss the medical world now mourns.

During the summer vacation, which lasts from the middle of July to the middle of September, private courses can be obtained as usual.

As an example of one of the courses, I will cite that on internal medicine, by Dr. Heinrich Lorenz, assistant to Professor Nothnagel. The class meets in the ward daily. On arrival each member finds he has a case allotted him. Usually a half hour is given for diagnosis, and if the full time is not required it is spent in diagnosing cases allotted to your colleagues. Dr. Lorenz picks out two of the most instructive cases, and gives a thorough demonstration on them, going into the causes of the symptoms and signs; the two cases occupy about one hour.

All instruction, including the private courses, is given in German. There is no instruction in English, as I have often heard stated. It should be remembered that physicians come for instruction, as well as to have the opportunity of diagnosing, which is minutely and carefully given, therefore the advantage derived depends upon whether German is known or not.

Cost of instruction, for the general clinics, ten florins (a florin is forty-two cents), this is for the year, and is paid at the beginning of the winter session, for these seats are allotted for the clinic. For the private courses the fees vary from twenty to twenty-five florins a course. A four weeks' course in obstetrical diagnosis costs fifty florins. It is better not to join more than two or three courses at one time, otherwise little time is left for reading, and frequently I have heard physicians say, "When I first came, I joined more courses than I could possibly attend."

The cost of living in Vienna is more than that in other European cities, but less than in New York. Apartments are easily found in the neighborhood of the "allgemeinen krankenhauses," ranging in price from twenty florins a month. A good dinner can be obtained at any of the restaurants for a florin, or you can have dinner served in your apartments.

There is an Anglo-American Association, which holds meetings every alternate Friday night, at a hotel called the Reidhof, the cost for membership is one florin. The Reidhof is the best hotel to go to on arrival, as it is situated in the neighborhood of the apartments.

Sylvester D. Willard,
M.R.C.S. Eng., L.R.C.P. Lond.
Member New York Medical Association.

Vienna, February 3, 1893.

LIGHT IN THE SICK-ROOM.

To the Editor of the Medical Record.

Sir: Dr. B. W. Richardson has very timely and lucidly written upon "Light in the Sick-room." Owing to a degree of its absence, the writer was once made to appear ludicrously solicitous.

He was attending five patients with confluent small-pox, in the mountains of West Virginia, all in one room.

Acting upon the old superstition (according to Dr. Richardson) he had still further darkened the room by lowering the little white curtain, and putting a cover over the small and only window. For two or more days, and at frequent intervals, he dropped a solution of atropine into the eye of a boy who lay in the darkest corner.

Upon expressing his fears as to the safety of the boy's eye to the backwoods' nurse, the latter said: "He hain't got no pox in his eye! His eye was hurt years ago."

Dr. Richardson's plea is for more solar light. But frequently the sick-room is kept dark all night, and this may become a cruelty, as in certain nervous affections, and especially in asthma.

An old man with mitral stenosis may metaphorically die a thousand deaths while struggling in the dark to get his breath; a light is made, and it is sometimes more promptly soothing than a hypodermic of morphia.

Objection may be made to a dim light, that it makes the air impure. Not if the patient is not subjected to that other evil—no ventilation.

It is a beautiful and comforting custom with certain religionists to light the candle when the soul is about to take its flight. Let not the struggling spirit of the child subject to night terrors, the asthmatic, or the delirious patient be further tormented by a darkness that can be felt without air, filled with ghouls, with goblins, and fiery serpents.

A light is a living thing, it helps to cheer, and it shortens the long hours before the dawn.

Such is the custom that to the passer by a light in a sick-room is a sign that all is not going on well within, but darkness should be associated with the dead.

A physician should be a child of light in more than one sense.

Thomas R. Evans, M.D.

Bellingto , Ia.

THE SECTION ON PUBLIC HEALTH.

To the Editor of the Medical Record.

Sir: I agree with you excellent article in the issue of March 4th, upon "Prospective Sanitary Legislation," but must take exception to your analysis of the "formidable negative vote." I believe that a very large majority of the Fellows are in favor of the reappointment of the committee.

Many who voted with the 67 did so from the belief that the Section on Public Health was the properly constituted authority to deal with all questions of the nature of those submitted to this much-abused committee.

I almost voted in the negative myself for this very reason.

An experience of more than twenty years has convinced me that the Fellows of the Academy take but a feeble interest in questions of public health. At last the membership is aroused, and an able committee has been created. They have made one admirable report. I believe they are equipped for excellent work in future. Your correspondent, who hides himself behind the tail end letters of the alphabet, says he does not know who the members of the committee are, although he claims to be "familiar with the proceedings of the Academy for nearly twenty years." If he had made some inquiries he might have found out some facts concerning their professional record which would have shown him the "improbability" of any of them "acting as cat's-paws in furtherance of the private purposes of some one or more individuals."

This committee is now virtually our Section on Public Health. I hope it will soon become a part of our actual committee, and will work with and through it as a body, as faithfully and effectively as some of its members, I am delighted to say, have worked in the past.

Sincerely yours,

Henry E. Crampton, M.D.

New York, March 4, 1893.

FLEXIBLE ELECTRODES.

To the Editor of the Medical Record.

Sir: I wish briefly to call attention to my new method of making the common electrodes used on the surface of the body.

At present sheets of metal are used as backs for the sponge, felt, or other material for conveying the current to the skin.

For these stiff sheets of metal I have substituted the common "gold" or silver cloth used for trimming uniforms, regalia, and the like.

This cloth can be bought in the shape of ribbons, one and one-fourth inch wide, and costs from twelve to fifty cents a yard.

The cloth is woven of cotton or silk threads spun

around with a minute ribbon of metal, gilded copper for the gold, and pure silver for the silver cloth.

The best kind has all the threads covered with silver. It costs fifty cents a yard. I have found this material a perfect conductor, equal to sheet metal.

Sheet metal, even when very thin, is stiff, and refuses to follow the hollows and prominences of the body.

Gold and silver cloth is as flexible as any other cloth, and does not prevent the felt or sponge from lying smoothly on any surface of the body, as the axilla, knee, and ankle-joints.

If desired, one could easily make electrodes that would evenly encase an extremity or the trunk. They can be made in the form of long bandages, or be bound down with a roller.

I sew the band of gold or silver cloth smoothly to the back of the felt or sponge, until the entire surface is covered. Then, leaving one end of the band free, I attach to this a piece of sheet brass, perforated for sewing, and bent so as to connect with the metal tip of the conducting cord. In this way one can make a better and larger electrode than by means of any clay or animal membrane.

In using the galvanic current I have often been annoyed by having the stiff metal electrode bridge over hollows and concentrate the force of the current unmercifully on a few points of the skin.

Of course a flexible electrode, if made long enough, can follow up any anatomical structure, such as the spine, or sciatic nerve, or the brachial plexus.

Respectfully,

O. T. Freer, M.D.

Chicago, Ill.

GERMAN AT THE PAN-AMERICAN CONGRESS.

To the Editor of the Medical Record.

Sir: You will, I hope, pardon me for remarking that of all strange communications which have from time to time appeared in the columns of the Record, the most astounding was the one from Dr. Mayer, seconding the suggestion of Professor Czerny, that German be made one of the official languages of the Pan-American Congress. What business has Dr. Czerny to dictate rules for the conduct of an American meeting? And why should nine-tenths of those assisting at the Congress be obliged to listen to a language of which they understand not a word, in order to tickle the pride of a great surgeon in Heidelberg? No one can deny the obligations under which German science has placed the entire medical world (although German surgeons should not forget that the outside barbarians have taught them to be clean, that is, aseptic), and none are more ready to acknowledge this indebtedness than are American physicians. But this is surely no reason why the additional burden of the German language should be imposed upon the members of the Pan-American Congress. Surely it is enough that one must understand French, Spanish, Portuguese, and English, in order to take an intelligent part in all the proceedings of the Congress, without being compelled to add German to his accomplishments as a prerequisite to having the honor of Dr. Czerny's presence at Washington. At the last Triennial Congress of American Physicians and Surgeons there were several guests from Germany. They were invited to be present, and accepted graciously and gracefully, without seeking to impose any rules upon the management of the Congress. Those who were invited and were unable to accept, sent their regrets by mail, and did not express their disapproval of the proposed meeting in an open letter to a medical journal, and then send reprints of this letter broadcast over the United States. Their instincts doubtless precluded the very thought of such discourtesy. That Dr. Czerny should take upon himself to "censure" the committee for not adding his mother tongue (which is spoken nowhere in America by natives) to the already long list of official languages, shows either an utter ignorance on his part of the character of the Congress, or else the possession of a very captious and ungracious spirit.

All honor, I say, to German medical science, for the world owes it much: well it would be if medical men were all acquainted with the virile and beautiful language of Virchow and Ziemssen and Esmarch and Billroth and Koch—and Czerny; but let us have no medical Cahenslyism in America.

F. X. Sch.

THE NEW YORK ACADEMY OF MEDICINE AND ITS NON-MEMBERSHIP.

To the Editor of the Medical Record.

Sir: Inasmuch as the New York Academy of Medicine is under discussion as to its aims and duties, its responsibilities and its work, it may not be amiss to call attention to a matter which has a claim before the Court Medical, in regard to the privileges of members over non-members. It is well known that the dues of membership are very high, and I believe it is also generally acknowledged that, as far as the uses of the Academy are concerned, the members have no advantages over the non-members. For instance, any respectable medical man, who has a paper to read, can have all the privileges of a member without any expenditure of funds. He can also take part in discussions by a simple invitation; he can also use the library and obtain all the advantages of the Academy, as even a club-house, free of expense. Said one of these gentlemen to me, "What is the use of paying annual dues to the Academy when I can have all I need of it for nothing." This, I claim, is an injustice to the active members, who pay for what they get, and sometimes for what they cannot enjoy, merely to be professionally courteous to those who might pay, but who will not.

The new President of the Academy enters upon his duties with an evident desire to do all he can to correct abuses and make the membership more compact, and I would respectfully call his attention to this matter as one which needs straightening out. There is so much competition in the different Sections for good papers, interesting discussions, and the like, that anyone who may be present is asked to contribute, and ofttimes members of the Academy must stand aside to give those who have the assurance to go ahead a better chance. Well may any member, under such circumstances, ask himself the question: "What advantage is there in being a member of the Academy compared with being an outsider, save the privilege of paying twenty dollars a year?" It would seem that the Academy is fast becoming a medical charity for non-members.

A Fellow of the Academy.

HYPNOTISM FROM THE PASSAGE OF A URETHRAL SOUND.

To the Editor of the Medical Record.

Sir: Allow me to make a few remarks on an article which appeared in the Medical Record of February 18, 1893, entitled, "Hypnotism Produced by the Passage of a Urethral Sound."

My objections are directed to two points only in Dr. Boyd's paper; that is, to the cause and the effect. The cause that produced the symptom Dr. Boyd writes about was not the sound, or, in fact, the sound was only of secondary importance in inducing the said symptom. The effect was not hypnotism by any means.

I will throughout my argument make use of the definitions and statements I find in the article on "Sleep," by Dr. Charles L. Dana, in the "Reference Handbook of the Medical Sciences."

Hypnotism is a morbid mental state characterized by—1, Perversion or suspension of consciousness; 2, abeyance of volition; 3, automatic response to commands or external sense impressions, and 4, intense concentration of the nervous force in some particular direction. While there might be objections raised against this def-

inition if a legal question were involved, it will be amply sufficient to show that the state related in Dr. Boyd's paper was not hypnotism, nay, it was not even sleep-hypnosis; for although the patient remained quietly on the couch, he answered when spoken to and complained of being very sleepy. So it must be conceded that if the state or condition in which the patient was was not hypnotism, neither could it be hypnosis or normal sleep, but it was a condition of hyperhypnosis, or, in fact, morbid drowsiness. This, Dana states, is a very common symptom, due to different causes, one of which is syphilis.

Dr. Boyd's patient did have syphilis—is it not likely that the syphilis was the principal factor in causing the drowsiness, aided by the recumbent position of the patient?

The passage of the steel sound in cases of gleet does very often cause no pain whatsoever to the patient, as the urethral canal in such cases is in no state of active inflammation. It very often, however, causes agreeable sensations to a patient, especially if he has abstained from sexual intercourse for some time.

Old men and men morbidly impotent do therefore very frequently make use of the sound or catheter for the purpose.

It is possible that in the case of Dr. Boyd the patient experienced some slight agreeable sensations, and it is a well-known fact that slightly agreeable sensations, will often produce sleepiness, while strong sensations of the same kind, like sexual orgasm for example—will dispel the same.

In conclusion, allow me to say that my idea of the case would be summed up in the following title: "Somnolence Caused by Syphilis, aided by the Use of a Steel Sound."

But wouldn't it be queer if the patient should read both our articles, and would come out with a third one, in which he explains that he ascribes his drowsiness to the fact that he attended a dance the night before, which deprived him of his normal amount of sleep?

ALFRED WALDEMAR HERZOG, M.D.

HOBOKEN, N. J.

THROAT DISEASES AT PUGET SOUND.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Seattle is a city of about sixty thousand inhabitants. Her vital statistics for the years 1891 and 1892 contain some interesting and important records, among which may be noted the small percentage of deaths from diseases involving the throat. This period of two years, during which a watchful Board of Health has carefully noted and tabulated the deaths in our city, has compassed the loss of but four lives from scarlet fever and three from diphtheria.

Comment is here made upon scarlet fever and diphtheria because these two diseases, in their more common and severe expressions, are prominently throat diseases, diphtheritic throat diseases; and also because they are exceedingly prevalent in the Mississippi Valley and in the East, decimating especially the ranks of the children. Diphtheria, however, occasionally finds a victim in the adult of younger or mature life. The recent death of the Rev. Phillips Brooks from diphtheria may remind all parents that the dire throat plague which hangs as a frequently recurring cloud, threatening the lives of their little ones, may also claim victims among the great and strong of the earth.

The object of this article is to inquire whether the inhabitants of this Puget Sound country are not especially favored by comparative immunity from throat, and especially from pharyngeal, affections. The writer has lived in this country, chiefly in Seattle, for the past six years, and his personal observations and notes are mainly based upon experience and records of this city.

Diphtheria and scarlet fever are classed as contagious diseases. It may be argued that Seattle and this part of the Pacific Northwest has been comparatively free from the ravages of these pestilences because the country is new, and the specific elements of contagion have not yet reached us in force. Yet every physician among us knows of isolated instances of both diseases occurring in persons recently from the East. Why does not the contagion spread? Why are deaths so few as compared with Eastern records?

Seattle has not been a model of municipal cleanliness. Probably the personal habits of her citizens have not been more sanitary or hygienic than those of the denizens of the large cities of the East. Our population is largely made up of immigrants from the Mississippi Valley and the Atlantic seaboard States, many of whom have had varied and sad experiences and observations of tonsillitis, quinsies, ulcerated sore throats, catarrhal sore throats, so-called diphtheritic sore throats, and of diphtheria and scarlet fever with sore throat. My own personal and family experience, and my general observation and practice as a physician in Seattle have impressed me with the conviction that this whole class of throat maladies is of rare occurrence here, and is generally mild in type as compared with the facts in the Eastern, the Middle, and Western States. Diphtheria is a contagious disease, but it is peculiarly a throat disease, and works its greatest ravages in countries where the faucial and pharyngeal organs are the frequent seat of irritation, of catarrhs, ulcerations, and inflammations enumerated above.

This is a very important problem to many parents who wish to become informed as to the most favorable climate in which to raise up children.

Very respectfully,

ARTHUR DE VOE, M.D.

SEATTLE, WASH., February 17, 1893.

ACUTE INFECTIOUS PHLEGMON OF THE PHARYNX, OR ANGINA LUDOVICI?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In reading through the interesting report of an "Acute Infectious Phlegmon of the Pharynx, etc.—Death in Seventy-two Hours," that appeared in your last issue from the pen of Dr. S. Kohn, I could not help noticing that a manifest discrepancy exists between the title of the article and the complex of symptoms so well described in its text. I beg to make the following respectful criticisms: Dr. Kohn calls the phenomenon described by him an infectious phlegmon of the pharynx, yet we wish to find those symptoms mentioned which are essential to that conception. It is said there that "some œdematous swelling" of the pharyngeal mucous membrane was observed, but there is no mention of those morbid changes which characterize a phlegmon of the pharynx. In using this term, authors are in the habit of understanding a phlegmonous destructive affection primarily of the pharynx itself, that is, a diffuse and dense infiltration of those muscular and connective-tissue elements which belong strictly to what anatomists designate by "pharynx." Within this infiltrated mass a number of necrotic foci appear, which, if the patient do not succumb, ultimately develop into a corresponding number of small, later on confluent and larger, abscesses, which are all located within the pharyngeal walls, and only extend or perforate into the pharyngeal cavity or the adjoining connective-tissue planes in a secondary manner.

This affection, I mean the phlegmon of the pharynx, is a rare affection, is very often fatal, and I have seen only one undoubted instance of it. Drs. A. Jacobi and A. Seibert were associated with me in the treatment of this case, and a careful post-mortem examination made by Dr. Seibert confirmed our views regarding its morbid character. (The case was reported by me in "Aseptic and Antiseptic Surgery," third edition, page 230.)

It is strange that, although Dr. Kohn mentions the term of angina Ludovici in his article, it does not occur to him that his case was undoubtedly an instance of this malady. The essential feature of sublingual cynanche or angina

Ludovici is a phlegmonous destruction of the submaxillary salivary gland, characterized by alarming and extensive dense œdema, caused by the unyielding character of the fascial envelope of this gland, which œdema is most manifest about the vicinity of the gland, that is, occupies the floor of the mouth. Hence the swelling and protrusion of the tongue, the swelling in the left submaxillary region, the dysphagia, and the peculiar articulation and phonation. In his article Dr. Kohn gives an excellent epitome of the symptoms of angina Ludovici, and does not produce any of the cardinal signs of true pharyngeal phlegmon.

So much about nomenclature: As regards therapy, I also beg to differ somewhat with my colleague. He says: "2. *Before any operative procedure was fairly indicated, the patient was dead;* laryngeal œdema, for which tracheotomy or intubation might have been done, had not manifested itself in any way. *The inflammatory infiltration of the cellular tissue of the chin and neck was so diffuse and hard, that incisions were out of question* (?): it was too early for fluctuation to have shown itself *and I deferred making any incision until I could be reasonably sure of evacuating pus* (?).[1]" Now, what are the facts in the case? We have a rapidly destructive process penned up within a fibrous capsule, in which septic necrosis is the leading feature, together with enormous tension, the mark of which is the dense and deep-seated œdema. Suppuration, that is emulsification of primarily necrosed elements, is a later phase of this process. If an early incision is made, ichor, no pus, or very little ichorous pus is found to occupy the centre of the focus. Fortunately, only few cases of the malignity of the one described by Dr. Kohn occur, in most instances fatal septicæmia does not set in, a deep-seated but well-defined abscess can be made out and incised, and the patient recovers. But even among these comparatively milder forms of the disease death will sometimes occur, due to hemorrhage caused by erosion of adjoining vessels or to subacute septicæmia.

I have always urged, and again urge, the importance and *necessity of early and ample incisions in angina Ludovici*, the cardinal indication being not so much evacuation of pus as the *relief of tension*. It is remarkable how great and prompt the relief is that follows an ample incision. Of course, anæsthesia is indispensable, and as there is no fluctuation to guide the surgeon, a careful and preparative exposure and incision of the submaxillary salivary gland must be done. This gland represents the focus of the mischief, will be found more or less disintegrated, and containing only a few drops of ichor or thin, extremely fetid pus. To wait for fluctuation seems to me to be an error, because much more risky than a properly made incision.

In conclusion I wish to mention one important pathognomonic fact, which, rarely absent, may determine an early incision. Pressure directed against various parts of the œdematous area will not elicit pain, except exactly over the submaxillary gland, where, even if the patient be dull and semi-conscious, firm pressure will cause unmistakable signs of distress.

Hoping that the unusual interest of the subject may warrant the publication of my lengthy letter,

I remain, very respectfully yours,

ARPAD G. GERSTER, M.D.

56 EAST TWENTY-FIFTH STREET,
March 4, 1893.

Venereal Disease in India.—The sick-rate under the head of venereal disease among the soldiers in India is far in excess of that under any other head. In Bengal the admissions for venereal disease were 504 per 1,000 in 1890, against 491 in 1889; in Madras, 491 per 1,000, against 452; in Bombay 516, against 481. Thus in 1890 no less than 34,152 soldiers, out of a strength of 67,823 in India, passed through the hospital for venereal disease.

[1] Italics and signs of interrogation my own.

New Instruments.

A NEW ENDOSCOPIC OBTURATOR FOR THE EXAMINATION OF THE POSTERIOR URETHRA.

BY HERMANN GOLDENBERG, M.D.,
NEW YORK.

IT is an astonishing fact that the ocular examination of the urethra is not in such general use as it deserves to be, and as was to be expected after the strenuous efforts of recent writers, who have shown the great advantages of an inspection of the urethra for diagnostic and therapeutic purposes.

As with all inventions, universal enthusiasm was aroused, as the natural consequence of which the endoscope was considered the instrument, *par excellence*, for the treatment of all affections of the urethra. A reaction and more or less disappointment followed, but it did not affect those who knew how to individualize and who confined themselves to using the endoscope only in those cases where a previous examination of the urine indicated that one had to deal with a circumscribed affection of the canal.

One of the drawbacks to the more general use of the endoscope, and not the least important one, is the difficulty that the practitioner experiences, and the pain that the patient has to undergo, during the introduction of a straight tube into the posterior urethra. It is true that in most cases the difficulty can be overcome after a more extended experience in the technique; but even one who knows how to introduce the endoscope will now and then encounter a case where the examination with a straight tube is difficult. Even Oberlaender, experienced and skilful as he is in this branch, mentions these difficulties and has recommended an instrument to overcome them.

It is unnecessary to state that the posterior urethra must be included in the ocular examination, as it is affected in nearly all cases of chronic gonorrhœa, and is, moreover, quite often the seat of granulations and papillomatous or polypoid vegetations.

The instrument of Oberlaender, the so-called "Charnier obturator," cannot be recommended by the writer because its many joints render it difficult to disinfect thoroughly. It is furthermore so constructed that, even with the greatest precaution, bleeding from the urethra cannot be avoided.

The instrument which I am about to describe seems to me to be free from these disadvantages and has proved to be very practical. It is an obturator which can be adjusted to any endoscopic tube, that of Klotz being preferred. The mechanism of the obturator is not new, having been employed by the late Dr. Elliott in his well-known uterine repositor, and later by several surgeons in their modifications of the original instrument; but it has never been used, to my knowledge, for the purpose here described.

As will be observed by reference to the cuts the instru-

ment is made so that it may be easily taken apart for cleansing purposes.

The shield *d*, with spiral terminal, fits closely over the two flattened wires *c*; the wires are joined at one end, the other end of one wire passes through the thumb-screw *a*, and is shortened or lengthened by turning the screw, thereby causing the spiral to assume the desired curve, which is registered on the dial *b*.

The second cut shows the complete instrument properly adjusted to an endoscopic tube ready for introduction in its curved form. The metal, as will be seen, is covered with a soft-rubber shield, fitting closely in the lumen of the endoscopic tube, and corresponding in size with that of the latter. After the instrument is introduced into the bladder, the end *c* is straightened by a few turns of the thumb-screw *a*, and withdrawn from the endoscopic tube, leaving the latter in place.

The obturator, originally only intended for this purpose, can also be used for introducing a soft-rubber catheter in prostatic hypertrophies, or in other cases where for any reason the introduction of a soft instrument is difficult. A soft catheter is simply attached to the obturator instead of the rubber shield.

I am indebted to Messrs. Tiemann & Co., for the skill with which they have carried out my suggestions.

26 East Sixty-second Street.

A NEW STOMACH-TUBE.

By FREDERICK F. C. DEMAREST, M.D.,

Passaic, N. J.

I have had occasion to use the ordinary stomach-tube, with funnel attachment, in some cases of subacute gastritis in my practice, and was impressed with the inconveniences and discomforts thereof. On this account I was led to devise the following apparatus, which in my hands and those of my patients, has seemed to do away with most of the disadvantages connected with the older method. I have had it so made that the patient is able, after a slight amount of instruction, to use the appliance himself, with ease and comfort.

Messrs. Tiemann & Co., of New York City, have made for me a combination consisting of a piece of rubber tubing attached to an ordinary fountain syringe (in the course of which there is inserted a hard-rubber cut-off) terminating at its end in a hard-rubber cylinder, which receives a double-jointed hard-rubber attachment, each portion of which is so arranged as to form sliding joints. The removal of the first section of this attachment, being of small calibre, secures an immediate siphonage; and the disconnection of it from the second section, which is of larger calibre, facilitates the passage from the stomach of its contents, should it contain, as is often the case, tenacious mucus or undigested material.

Trusting that the idea will be of benefit to someone, I offer it to the profession for what it may be worth.

A NEW RECTAL ELECTRODE.

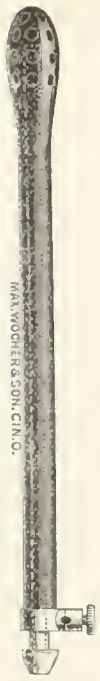
By LOUIS J. KROUSE, M.D.,

Cincinnati, O.

The accompanying cut represents a new rectal electrode (one-half natural size).

Local faradization of the rectum for atony of the bowels would, no doubt, be more often employed if a more suitable electrode than those ordinarily seen in the surgical stores, could be found.

The objection to the ordinary rectal electrode is that the metal end comes into direct contact with the non-sensitive mucous membrane of the gut, and may therefore injure its coats by having a too strong current running through it. To overcome this objection I had constructed for me, by the firm of Max Wocher & Son, of this city, the above-named instrument.



It is composed of two parts, an inner and an outer portion. The inner portion consists of a hollow metal tube, extending almost the whole length of the instrument, the lower end of which is arranged for the attachment of a Davidson's syringe, as well as for a thumb-screw, to which the cord of a battery can be attached.

The outer portion is made of hard rubber, the distal end of which is perforated by numerous holes through which the water, as well as the electrical current, can pass. The other end is made to screw on to the metal portion.

In using this electrode it is always necessary to inject water through the electrode into the bowels, so as to immerse the perforated end; otherwise the circuit would not be complete, and the patient would not get the benefit of the current.

The advantages of this electrode over those ordinarily used are, first, that the metal end does not come into direct contact with the gut, and, therefore, cannot injure its membrane by the electrolytic action of the current; and, secondly, that a much more powerful current can be used without the fear of injury to the gut, as there is always a layer of water between it and the electrode. The instrument can readily be taken apart and cleaned.

A SYRINGE FOR INTRA-UTERINE INJECTIONS.

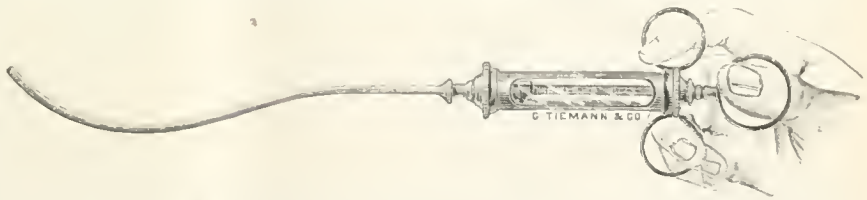
By ALBERT C. STANARD, M.D.,

New York.

The cut herewith presented is one of a syringe which I have found to be more convenient than any other I know for intra-uterine injections of carbolic acid, or mixtures of carbolic acid with glycerine.

The barrel is of brass, rounded at the end, and silver-plated. It is small enough to enter the body of the uterus in most cases easily, flexible enough to allow modification of its curve, and has a bore large enough for injecting glycerine.

I use peroxide of hydrogen more than any other substance for intra-uterine injection. The instrument is well



adapted to this use: the capacity of the cylinder (℥iv.) allowing small quantities (say ℥ss.) to be repeatedly injected at intervals of a few seconds.

Cautions: 1. Inject a smaller quantity than the estimated capacity of the uterus.

2. Pass the end of the barrel only a little way above the internal os, and inject gently.

A jet against the fundus, or distention of the uterus, may cause colic.

108 West Thirty-fourth Street.

Dangers of Alpine Climbing.—Thirty-two lives were lost during the past summer among the holiday mountain climbers in Europe. Of those who thus perished no less than twenty-six attempted perilous ascents without the aid of guides.

The French Association for the Advancement of Science.—The twenty-second meeting of this Association will be held in 1893, in Besançon, under the presidency of M. Bouchard.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 4, 1893.

	Cases	Deaths.
Typhus fever	13	4
Typhoid fever	12	3
Scarlet fever	183	14
Cerebro-spinal meningitis	6	6
Measles	109	3
Diphtheria	104	24
Small-pox	8	3
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

Pessimism as a Neurosis.—In the *American Journal of Psychology* two recent works dealing with pessimisms are referred to: Magalhaes's conclusions are based upon the study of avowed pessimists such as Leopardi, Schopenhauer, Flaubert, Baudelaire, Amiel, and Byron, and of others who, without the creed of pessimism, reveal its characteristics. Among these are Carlyle, Swift, Tolstoï, de Sévancour, Shelley, and Chateaubriand. Pessimism is regarded as a species of nerve weakness, of which the chief character is nervous instability with alternation of irritability and prostration. The subject is super-sensitive; impressions call forth intense and prolonged reactions followed by exhaustion. He is characterized by a general hyperæsthesia, which naturally results in an excess of suffering. From instability and hyperæsthesia results discord between the feelings themselves—between the feelings and the intelligence—between the feelings, the ideas, and the volitions. The discord between the feelings shows itself in a great variety of paradoxes, contradictions, and inconsistencies. To the pessimist the possession of a desired object does not atone for the former privation. The pain of unsatisfied desire is replaced by the pain of *ennui*. With inability to enjoy what he has are coupled extravagant expectations regarding that which he does not have. He is extremely susceptible, both to kindness and to contempt. He passes suddenly from violent irritability to languor, from self-confidence and vanity to extreme self-abasement. His hyperæsthesia results in intellectual discords. For this involves a great vivacity of the intuitive imagination, which favors the setting up of extravagant ideals lacking in solid representative elements. Hence a gap opens between his ideal and the actual. He can never realize the ideal he pursues, and so his feelings take on a sombre hue. From this excessive idealism results a mania of doubt (Amiel), a certain distrust of all his rational objective knowledge. It assumes another form in extreme subjectivism. The pessimist is haunted by images of tiniest religious scruples, suspicions, fears, and anxieties, resulting in alienation from friends, seclusion, misanthropy. The pessimist is further characterized by an incapacity for prolonged attention, a refractory attention, and a feeble will. These result in inaction, quietism, reverie, self-objecination, abolition of the personality, annihilation of the will, mounting sometimes even to poetic or religious ecstacy. More than Magalhaes is Dr. Huyghe concerned with the pathologic basis of pessimism. He connects it with arthritism, a constitutional disturbance of nutrition and circulation, resulting in local congestions of vitiated blood. These may result in gout, rheumatism, kidney, or brain diseases. Is there any psychic aspect to these maladies? The ancients associated hypochondria or melancholia with all of them. Pessimism would seem to be the mental side of arthritism.

White Patches in the Mouth: Syphilis and Smoking.—Professor Erb discusses the relation of these white patches, which he calls "Plaquesnarben," owing to their frequent connection with mucous plaques. When investigating the relation of syphilis to locomotor ataxy, the author collected 240 such cases, only two of which occurred in women (*The British Medical Journal*). In 154 of the 240 the patches were present at the angles of the mouth alone, and in 204 in other parts of the mouth, as well as at the angles, whereas in only 9 cases were they seen on the tongue alone. Syphilis was known to have occurred in 191 of the 240 cases. Of the remaining 49, 21 could not certainly be said never to have had syphilis, 8 had scars on the tibiæ, and other signs, though they denied syphilis, and 6 had either spinal myosis or tabes dorsalis. Thus, in four-fifths of the cases syphilis was present, and in 4 or 5 the patches disappeared under anti-syphilitic treatment. In one-tenth to one-fifth of these cases there was no history of syphilis. In regard to smoking, only 148 cases were investigated, 47 of which occurred in slight or non-smokers, and 101 in moderate or heavy smokers. Of the same 148 cases, 100 had had syphilis, 64 being heavy smokers, and 36 slight or non-smokers. Of the remaining 48 non-syphilitic cases, 11 were slight or non-smokers, but 5 of the 11 were doubtful in regard to syphilis. In the 148 cases syphilis was present alone in 36, smoking alone in 37, syphilis and smoking together in 64, and neither one nor the other in 11. Erb concludes (1) that syphilis and smoking respectively may produce these patches about equally; (2) that generally both factors are present; (3) that the patches are very rare if both be absent; (4) that smoking alone can produce them if in great excess, and especially strong cigars; and (5) that in the presence of syphilis a much less degree of smoking suffices. The author is also inclined to admit a predisposition in the mucous membrane. If these patches occur in slight or non-smokers, and no other cause exist, syphilis is nearly certain to be present. In moderate smokers a suspicion of syphilis raised by other symptoms is strengthened, and treatment should be adopted. In the case of heavy smokers much caution is needed in drawing conclusions.

A Nurses' Union has been organized in Paris. It is asserted that there are 6,000 nurses of different grades employed in the hospitals and asylums of the Seine department. They work from fifteen to sixteen hours a day. Ordinary nurses earn 25 francs a month; matrons, 43 francs; sub-matrons, 33 francs; and certificated nurses, 38 francs; for reasons of economy, however, the latter are rarely chosen. Many nurses, in order to earn their living, are obliged to seek work among the general public. Agencies exist for this purpose which make the nurses pay so heavy a commission that their wages are greatly reduced. The union has been formed to remedy these evils.

Excision of Syphilitic Chancre.—S. I. Goldenberg, of Nikolayeff, relates four cases of primary syphilitic sclerosis of the prepuce in men, aged from twenty-one to thirty, in which he performed circumcision, excising as much as possible of the foreskin, together with the ulcer. In one of the cases the operation was done on the second day after the appearance of the lesion, or on the seventh after the last intercourse (the patient's wife was found to be covered with syphilides); in another on the third and sixth days respectively; in a third, on the fifth day after the development of the sclerosis; and in the fourth, on the fourteenth day after the last coitus, or on the fifth of the symptoms. In the latter case the operation failed to prevent the development of secondary manifestations, roseola, etc., appearing on the twenty-seventh day after excision. But the other three patients remained absolutely free from any signs of syphilis up to the present. In one of the cases seventeen months passed since the operation; in another, nine; and in the third, eighteen. The author believes that he has succeeded in cutting short the course of syphilis in all the three men.—*British Medical Journal.*

Dr. John Strahan, of Belfast, has been awarded the Warren Triennial Prize, of $500, for a treatise on "Rickets."

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Original Articles.

OBSERVATIONS ON CHRONIC RELAPSING APPENDICITIS.

TWELVE OPERATIONS IN THE QUIESCENT PERIOD, WITH ONE DEATH.[1]

BY WILLIAM T. BULL, M.D.,

SURGEON TO THE NEW YORK HOSPITAL.

OVER two years ago this subject was discussed[2] by this Society, chiefly on theoretical grounds, because we were not in possession of much clinical evidence. Since then many facts have been reported, and papers written, by our members and by others, here and abroad; and it seems to me appropriate to call it to your attention again by submitting my experience in operations for the relief of chronic appendicitis. I am the more impelled to do this because it is desirable to report at once a fatal case after a series of successful ones. In accordance with the conviction that has been rapidly gaining ground, that it was proper to remove the appendix in cases where frequently recurring attacks interfered with the occupation of the patient, or kept up a state of chronic ill-health, I have removed the organ in twelve instances. Sufficient details of the cases are given in the adjoining table.

Lest it may be thought that I have applied the above-mentioned indication entirely from a surgical point of view, let me add that in twelve other cases, where the question of operation has been raised, I have advised against it. In three of these patients the operation had been suggested by physicians after but one attack; in the remaining nine there had been a number of attacks, varying from three to a dozen, extending over a period of one to several years.

This leads me to express more definitely the circumstances under which these operations have been done. All the patients were in other respects in good health. In addition to the history of repeated attacks, eight cases have presented evidences of disease of the appendix in the presence of a tumor in the iliac fossa—varying somewhat in its position and the distinctness with which it could be felt. The tumor was more distinct the nearer the time of examination approached the subsidence of the last attack. In four cases there was no tumor, but a tender area corresponding roughly to the point emphasized by McBurney as of diagnostic value. Once only the loin was tender (Case 1). But all the patients without a distinctly palpable tumor had a history of continuous discomfort, or pain on exertion, with or without irregularity in the action of the bowels. Four patients were never entirely well after the first attack. In one of these (Case 2) the indurated

Case.	Physician.	Sex.	Age.	Date of Operation.	Previous History.	Number of Attacks and Condition in Interval.	Symptoms at Time of Operation.	Condition of Appendix.	Result.	After-history.
1	Dr. C. H. May.	M.	17	Feb. 5, 1891.	First operation; appendix not found.	1890, July, Oct., Nov., Dec., severe attacks, varying five to seven days in duration; fever two or three days; rectal temperature always two degrees higher than mouth.	.....	.....	Recovery; primary union; 3 weeks.	Drain through loin and through wound; January 1, 1893, perfectly well.
				April 6, 1891.	Second operation.	Attacks similar to others in March and April; desirous of going to Europe; constipated.	All symptoms have disappeared, except tenderness in loin and indefinite fulness.	Omentum adherent to cæcum, which was bound to posterior wall by dense false membrane three-eighths inch thick; appendix embedded in this, its tip perforated and ending in abscess; two drachms of pus with small fecal concretion; two inches tied off; cæcal end not recognizable.		
2	Dr. J. E. Winters.	M.	19	May 4, 1891.	.....	Three years ago, attack of two or three days' duration; since then similar attacks every three months; relieved by cathartics; tumor perceptible in last five days; constant anxiety of parents.	Tender tumor half as large as thumb in iliac fossa; superficial.	Slender adhesions binding omentum and cæcum to anterior parietes; appendix sharply curved on itself and fastened to cæcum by thin false membrane; coats thickened; lumen open.	Recovery, primary union; 3 weeks.	July, 1893, no symptoms since operation.
3	Dr. Frank Paddock, Pittsfield, Mass.; Dr. F. P. Kinnicutt.	M	27	Aug. 4, 1891.	Syphilis.	Two severe attacks in last four months, tumor felt in interval; marked debility; loss of flesh; in bed most of time, addicted to morphine.	Tender tumor half the size of thumb in iliac fossa near median line; pain on exertion; constipation alternating with diarrhœa; unable to take solids without pain; thick abdominal wall.	Cæcum adherent to anterior parietes; appendix in layers of false membrane extending to ileum; its tip adherent to the small intestine, dilated, not perforated, lumen constricted at two points, few drops of pus in adhesions.	Recovery; abscess; 6 weeks.	January 1, 1893, perfectly well.
4	Dr. C. A. Powers.	M.	35	Nov. 11, 1891.	Habitual constipation.	In 1880–81, first slight attack, and four or five each year since. 1891. Attacks in March, June, and August, the latter two more severe and followed by continuous dull pain in right iliac fossa.	Indistinct tumor at site of appendix, slight pain on exertion, felt in last two months in iliac fossa, umbilical region, and in right hip; not affected by laxatives or enemata.	Omentum lightly adherent to parietes; cæcum normal; the appendix bent at right angle by thickening of its mesentery adherent by tip to inner surface of cæcum; walls thick and stiff, lumen pervious.	Recovery; primary union, 3 weeks.	January, 1892. Entire cessation of symptoms; microscopical examination in body of article.

[1] A paper read before the Practitioners' Society, February 3, 1893

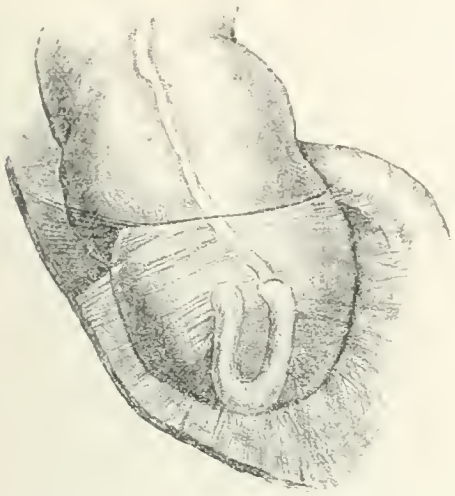
[2] New York MEDICAL RECORD, April 20, 1890.

Case.	Physician.	Sex.	Age.	Date of Operation.	Previous History.	Number of Attacks and Condition in Interval.	Symptoms at Time of Operation.	Condition of Appendix.	Result.	After-history.
5	Dr. F. P. Kinnicutt.	M.	39	Nov. 24, 1891.	Typhoid fever in 1879.	1889. Two attacks; not severe. 1890. Three attacks; one severe. 1891. Seven attacks up to November; one severe; type of mild intestinal obstruction; anxious to travel.	Indurated mass outer side of right rectus muscle, level of umbilicus, hen's egg size: abdominal wall very thick; pelvis deep antero-posteriorly.	Dense mass of adhesions binding cæcum to posterior abdominal wall; appendix dug out of this with much difficulty from behind cæcum; cæcal orifice closed.	Recovery; mural abscess; 7 weeks.	January, 1893. Perfectly well; required for one month laxative daily; appendix in two pieces examined by Dr. Ferguson, N. Y. Hospital Laboratory; minute perforation at tip.
6	Dr. W. B. Coley.	M.	38	Feb. 29, 1892.	Contusion of right iliac region twelve years ago.	Slight attacks monthly during last twelve years; more severe in the last year; frequently constipated and tumor felt on three occasions; constant sense of weight in iliac fossa.	Five days after last attack, indistinct tumor, size of thumb, in iliac fossa; this has been more pronounced in three other attacks.	Appendix buried in dense adhesions, fixing cæcum in iliac fossa; only one inch recognizable; lumen obliterated.	Recovery; primary union; abscess; 3½ weeks.	January, 1893. No more pain; required laxatives for two months. Path. report: normal structure entirely disappeared, lumen filled with dense connective tissue.
7	New York Hospital.	M.	25	April 11, 1892.	....	Acute appendicitis twenty-two months ago; recovered; abscess four months ago; opened on fifteenth day; wound closed in seven weeks; since then occasional severe pain, with constipation and tympanites, lasting two or three days; relieved by cathartics.	Constipation, tympanites, local pain, and tenderness; no tumor; lasting two days.	On opening peritoneum, the underlying adherent cæcum is torn and sutured; dense mass of adhesions; appendix found with difficulty, its fore end being adherent to cæcum, bent sharply on itself, and covered with false membrane.	Recovery; mural abscess; 6 weeks.	January 1, 1893. Has had no recurrence of symptoms.
8	Dr. Ross, Elmira.	M.	45	April 23, 1892.	Typhoid fever eighteen years ago.	Nine months ago, attack lasting six weeks; tender ever since, and seven distinct recurrences with tumor, which disappeared in interval; emaciation and anæmia.	Tumor attached to parietes just above Poupart's ligament; firm, slightly tender.	Tumor made up of thickened omentum, adherent to cæcum and abdominal wall, and enclosing the sharply bent appendix.	Recovery; primary union; 5 weeks.	January 1, 1892. Quite well.
9	Dr. T. R. Chambers, Orange, N. J.	F.	50	June, 1892...	Constipation alternating with diarrhœa.	Four attacks, five to seven days' duration: two and a half years, five months, three months, and three weeks ago; past six months constant "uncomfortable feeling" in region of appendix.	Abdominal wall very thick; no tenderness; no distinct tumor: an indefinite "mass" felt, under ether, by Dr. Chambers, a month before.	Slender adhesion of omentum to anterior abdominal parietes; beneath the appendix apparently normal; pathologist reports mucous coat thickened.	Recovery; primary union; 3 weeks.	October, 1892. Entire cessation of symptoms.
10	Dr. W. E. Forrest.	M.	39	Oct. 7, 1892.	.....	1890, January. First attack following "grippe," three or four days' duration. 1891. Second attack, one week. 1892. March, May, August, each about one week; not induced by constipation.	Tender mass in iliac fossa, not distinct in outline but superficial to the feel.	Omentum and cæcum adherent to anterior abdominal wall; appendix below cæcum and adherent to it in part; in part enveloped in the adherent omentum.	Recovery; primary union; 2½ weeks.	January 1, 1893. Quite well.
11	Dr. F. H. Rankin, Newport, R. I.	M.	33	Oct. 27, 1892.	Typhoid fever three years ago.	One year ago, severe attack of six weeks' duration; four months ago, second attack, lasting three weeks; large "induration" left behind, which has not yet entirely disappeared; gaining in general health; constant discomfort in iliac fossa, and pain after examinations.	Distinct, immovable, firm mass, thumb size, in upper part of right iliac fossa; not tender.	Cæcum drawn into pelvis, adherent anteriorly; appendix runs up behind cæcum, and is bound to it by a dense mass of adhesions; dilated at tip; lumen pervious; walls thinned at one spot about middle, from which few drops fetid mucus escape.	Recovery; primary union; 2½ weeks.	January, 1893. Quite well.
12	Dr. L. P. Walton.	M.	26	Nov. 25, 1892.	.....	Eight or nine attacks in four years; severe last two months ago; pain since interferes with occupation as coachman.	Pain on exertion; tender and distinct tumor; small, soft, deeply seated.	Behind and adherent to cæcum, perforated at tip; one drachm muco-pus in adhesions.	Died.	Twelfth day. Peritonitis.

mass, six weeks after the onset of the second attack, was as large as the fist, and plainly to be felt by rectum. Four months later, at time of operation, it was as large as the thumb. Two patients were unwilling to travel, convinced by previous experience that their pleasure would be frequently interrupted, and apprehensive of the increased severity of future attacks; six patients were unable to pursue business, or laborious occupations, or to go to school without frequent abdominal discomfort. The duration of the disease has extended over a period from one to ten years, covering a number of attacks from two to twenty or thirty. When the number of relapses was fewest, their character has been unusually severe, and followed by protracted convalescence. Thus Cases 3 and 6 were practically disabled from the occurrence of the first attack, every effort to move about being attended with pain and some digestive disturbance, and progressive loss of flesh and strength. In brief, all cases presented features of a chronic inflammation of the appendix with relapses. This condition has been termed by a French writer[1] "chronic relapsing appendicitis." I think the term is a good one, and worthy of adoption, to distinguish between the class of cases I am dwelling on and those which may be termed recurring appendicitis (Talamon). In the latter the attacks recur at long or irregular intervals, and are followed by periods of good health. Each attack is an independent affection. While it undoubtedly predisposes to a recurrence, that event may never occur. In the latter, chronic relapsing appendicitis, there is no return to absolute good health, there are always such evidences of disease of the appendix, as local pain or discomfort, increased on exertion, tenderness, tumor; and to these are added the frequent exacerbations of acute inflammation. Several attacks of recurrent appendicitis often induce the other condition of chronic

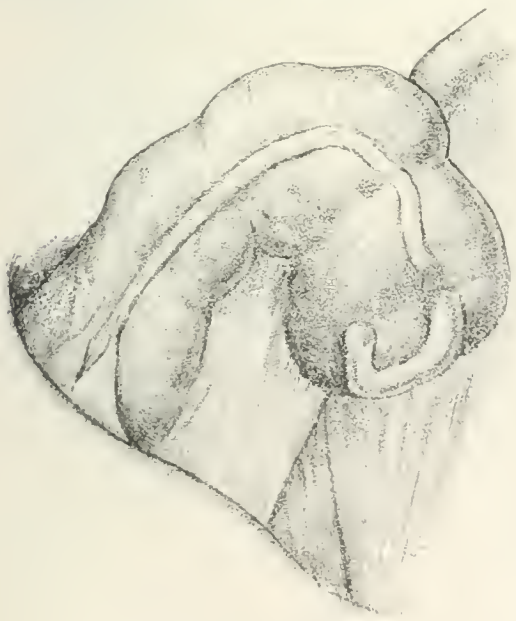
[1] Talamon: Appendicite et Perityphlite. Paris: Rueff & Cie. 1892.

inflammation with relapse. In fact, one attack may do this. It is when this latter condition is fully developed that I believe the operation indicated. The recurring attacks may be met at the time of their appearance in ac-



Case 2.—Slender adhesions binding cæcum and omentum to anterior abdominal wall; appendix sharply curved on itself and attached by thin membrane to cæcum.

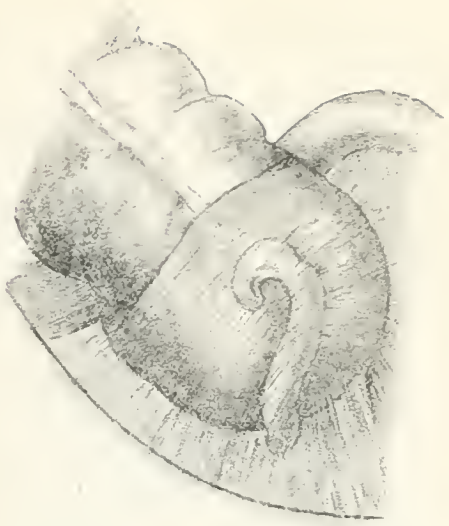
Case 3.—False membrane covering cæcum, appendix, and ileum, and containing near the appendix a few drops of pus; tip of appendix adherent to ileum, lumen constricted at two points.



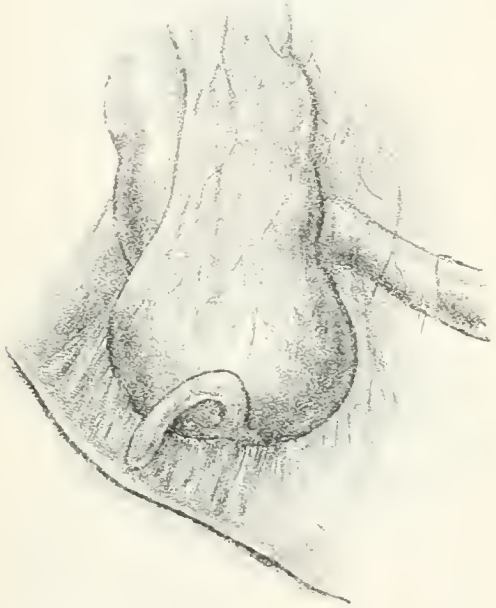
Case 4.—Appendix bent at a right angle by thickening of its mesentery, adherent by tip to under surface of cæcum.

cordance with the gravity of the symptoms. The twelve cases above referred to, in which no operation was advised, can be properly ranged in this class.

The condition of the appendix has been very varied. In all cases but one (Case 9), inspection demonstrated the existence of chronic inflammation of all the coats, as



Case 7.—Appendix curled up on cæcum and buried in smooth old false membrane covering the extremity of the cæcum and binding it to the parietes behind.

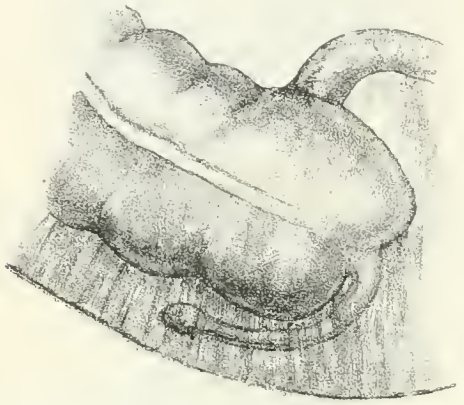


Case 8.—Appendix sharply bent and embedded in a mass of thickened omentum adherent to anterior wall opposite Poupart's ligament.

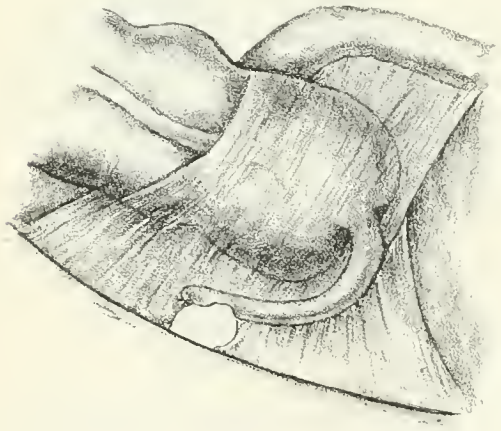
Case 10.—Omentum and cæcum adherent to anterior parietes, appendix adherent in part to cæcum and in part, after a sharp bend, enveloped in the omentum.

shown by abnormal thickening and stiffness of the tube. Adhesions of varying density fixed the appendix in different situations; behind the cæcum or in the iliac fossa, in

5 cases; to the anterior abdominal wall, with the help of the omentum, in 2 cases: to the cæcum itself, or the ileum, in 4 cases; and once its tip was free. Change in the axis of the appendix was noted in five instances, it being sharply bent on itself, besides being adherent. Ulceration of the mucous membrane was noticed at the site of the bend in one case. In two cases there was a decided constriction and dilatation beyond the bend, and four presented perforations, with the same number of small purulent collections. But only one fecal concretion was found. Once the lumen was entirely obliterated. In only one instance was the cæcal end occluded. I have endeavored in the accompanying diagrams to give a rough idea of some of these conditions.



Case 11.—Appendix behind cæcum and adherent with it to lateral and posterior parietes; extremity dilated, walls ulcerated at one point.



Case 12.—A thin film of false membrane spread over cæcum, binding it and appendix to the posterior parietes; perforation; small collection of muco-pus. Died.

The microscopic examination in three cases is as follows:

In Case 2 Dr. Van Cott, of the Hoagland Laboratory, reported to this effect: In the thickened, serous, muscular, and submucous coats are newly formed vessels and infiltrating round cells. The mucous coat is atrophied, its arterioles show changes due to endarteritis obliterans. There are only occasional remains of follicles lined with columnar epithelium, and its surface is in a condition which resembles coagulation necrosis, being hemorrhagic in spots. There is a small ulcer where the appendix was bent.

In Case 5 Dr. Ferguson, pathologist to the New York Hospital, made the following notes: The two portions of appendix measure together 4½ ctm. The mucous coat in both is thickened and hyperæmic. Microscopic examination reveals inflammatory changes in the mucous and submucous coats of the tip, partially destroying the follicles, which are recognized only in a portion of the mucous coat. There is a minute perforation at the tip. Sections through the walls of the tube elsewhere show similar destruction of the mucous coat by inflammation, and this inflammatory change extends along the planes of fibrous tissue between the muscular layers. The further the sections are made from the tip, the less marked are the evidences of inflammation, though no parts examined are wholly free from it.

In Case 6 Dr. George A. Tuttle reported as follows: Specimen consists of portion of appendix about one inch long, covered with peritoneum, to which is attached another fragment one-half inch in length. The normal structure has entirely disappeared. The lumen is filled with dense connective tissue, between which and the muscular coat is a layer of loose connective tissue infiltrated with leucocytes. There is no appearance of mucous membrane. The peritoneal surface is normal.

It is noticeable, in regard to the age of these patients, that eight out of twelve were between twenty-five and forty, two were under twenty, three were between twenty to thirty, five between thirty and forty, two were over forty. All but one were men.

The result of the operation has been satisfactory in every case, as I have learned from reports made subsequently. All symptoms have disappeared, and the patients express the utmost gratification at their freedom from anxiety and from actual discomfort. Two patients only required subsequent treatment for atonic constipation, by internal administration of pills of aloes, belladonna, and strychnia.

The one fatal case is worthy of more detail than is given in the table. The man was a coachman, whose attacks had always been severe, beginning with pain and vomiting, followed by fever and tumor. They confined him to bed a week or ten days, and on two occasions the question of operation was seriously considered. Each attack was followed by slower disappearance of the local discomfort, until after the last attack he felt so much distress in making the effort to mount his box, that he felt he could work no longer. He presented a distinct, tender, deeply seated tumor. At the operation a few drops of thin pus were found in the adhesions behind the cæcum, communicating with the perforated appendix. In other respects the operation was uncomplicated. The parts were thoroughly washed with boiled water and 1 to 10,000 bichloride, and dusted with iodoform. The cæcal end of the appendix was inverted and carefully "overlaid" with Lembert sutures. No drain was employed. Peritonitis developed on the third day. The wound in the parietes contained a little pus. The whole region was thoroughly opened and drained on the sixth day, and on the tenth day a collection in the pelvis was evacuated. The peritonitis persisted, and he died on the twelfth day. There was no escape of intestinal contents and no purulent collection beyond those which had been found. The most rational explanation of this case is that, despite precautions, the wound was infected by the already existing "pus-focus."

Is the operation dangerous? Statistics (for which I am indebted to Dr. C. A. Powers) show sixty-four operations already reported, with no deaths. My own cases added make seventy-six excisions of the appendix with one death. Moreover, I have had seven exploratory operations, and one case in which an apparently healthy appendix, a small uterine fibroid, and several hemorrhoidal tumors were removed. All these recovered. It may, then, be truthfully said that the operation has not so far proved dangerous. It may, however, be attended with more risk in one case than in another, and it is instructive to note the conditions which affect the prognosis in this respect. In two cases (1 and 5) the appendix was so deeply buried in dense false membrane that it was recognized and removed only with difficult and extensive dissection. In one instance (7) the inflammatory new material had so fused cæcum and appendix together that the former viscus was torn in removing the appendix. In four operations pus was encountered, which exposed the healthy peritoneum and raw surfaces to infection. Several patients had very thick abdominal walls, necessitating large incisions and greater chance of suppuration in their

healing. I have not found bleeding from the separation of adhesions a source of annoyance and delay; but the depth of the wounds in those with a deep trunk and thick walls has made the operations prolonged. One is obliged to work by touch rather than by sight, and I have been guided to the site of the appendix by the sense of a nodular or elongated mass in the tissue of a lesser density surrounding it. These features must not be left out of sight in estimating the risk in a given case, and they make the following inquiry of interest.

Can we draw any conclusions, from the history or the physical examination, as to the condition of the appendix? Cases 2, 4, 6, 9, and 10 seem to justify this reply. A history of frequently repeated light attacks, with discomfort in the intervals, indicates chronic inflammation of the appendix with stenosis of its lumen by bending or adhesions, or both. The shorter the duration of the attacks the less likely one is to encounter dense and resisting adhesions. Cases 12, 11, 1, 3, and 8 have been marked by severe attacks with appreciable "tumor," followed by slow convalescence, and recurring after brief intervals. These features point to an appendix deeply buried in false membrane, or closely adherent to adjoining intestine or parietes. And a small abscess is more likely to be encountered (as shown by four cases) without there being tenderness or elevation of temperature. Without specifying the cases, I may further say that a superficial tumor, or one adherent to the abdominal wall, is probably made up of omentum containing the appendix, and possibly adherent to the cæcum as well. With a tumor deeply seated in the iliac fossa one is more likely to find the cæcum adherent to the parietes posteriorly, and the appendix behind it or curled up in the adhesions. In general a large exudation or tumor will offer difficulties and risks, for obvious reasons. But in an old case (No. 4, for instance) extending over three years, there may be no considerable volume to the tumor, while the toughness and extent of the false membrane may make success doubtful.

A single case (No. 7) demonstrates the advantage of the operation in removing symptoms which persist even after suppurative appendicitis has occurred. A patient whose abscess had been opened without removal of the appendix had frequent attacks of mild obstruction, constipation, tympanites, local pain and tenderness, without tumor, persisting for several days and requiring both cathartics and enemata for his relief. This man was twice in the hospital for these attacks, and on the occasion of another preferred to have the operation done.

The cases I present do not afford sufficient data to answer the question asked in the last discussion—Are recurrent attacks more fatal than primary ones?[1] They throw some light, however, on the point which has been often raised, that recurrences with local peritonitis raise, by means of adhesions, a barrier against general peritonitis. Dr. Draper has stated that recurrent attacks were not usually fatal, that it was the primary attacks which caused the great mortality; while Price,[2] in a *résumé* of the subject, says: "Of 30 cases of acute perforative appendicitis, where recurrence was noted, 22 cases exploded into abscesses or general peritonitis before the third attack." It seems to me fair to assume that in all of the cases I report, with but one exception (Case 9), there was a sufficient deposit of plastic material about the appendix to make any suppurative process which might develop in a subsequent attack a limited one; that the peritonitis, even if suppurative, might not threaten life unless allowed to go unmolested for a period longer than that now usually considered safe. In four (Cases 1, 5, 11, 12), the appendix was so buried behind the cæcum that a suppurative focus would have been well outside of the general peritoneal cavity. If we look at the clinical evidence as to the character of the attacks, we may truly say that the great majority were not severe nor threatening. It might therefore be argued that patients with recurring attacks were in no danger. On the other hand, there are the figures quoted above (Price), the often-repeated statement that there is no way of knowing what is to be the nature of another attack, the fact that patients cannot always be in a position to secure prompt surgical treatment, and, furthermore, the circumstance, noted by others and observed by myself in three instances, that small suppurating foci, not sufficient to cause pronounced local symptoms, may give rise to systemic blood-poisoning through phlebitis of the mesenteric and portal veins. Add to these considerations the evidence already given of the chronic invalidism of these patients, the mental disquietude, and the interruption to pursuits, and we have reasons enough to justify the surgical operation, despite its occasional failure.

A question already much debated is, whether the operation should be done at the time of an attack, or during quiescence. The former period has been advocated because of the uncertainty as to whether another attack would occur, because of the difficulties met with in some cases—difficulties which I have dwelt on as increasing the operative risk—and because it may not be considered judicious surgery to perform a risky operation at a time when life is in no danger. If we accept the clinical evidence offered of the typical course of the chronic relapsing cases, and leave out of consideration the recurring appendicitis, we can be reasonably sure of the succession of relapses. The difficulties met with would be quite as great at the time of an attack. The danger of septic infection in dealing with an acutely inflamed, even suppurating, appendix, would be even greater than if it were attacked in a quiescent period. It might even be impossible to accomplish the object of the operation—the removal of the appendix. The operation at the time of attack is liable to be undertaken with disadvantages of insufficient preparation or unsatisfactory surroundings. It is likely to require larger incisions with drainage of suppurative foci; and these conditions are more favorable to development of hernia subsequently. In short, I believe it to be attended with quite as much uncertainty as the operation in the interval.

Some of the difficulties met with hitherto we may avoid in the future by removing the appendix at an earlier stage in the history of the disease—before successive attacks of peritonitis have left layer after layer of false membrane to conceal it. Some of the uncertainties and risks arising from features I have described may cause us to defer the operation in individual cases until the time of an attack. With patients in otherwise ill condition, this would be obviously judicious. But, with these exceptions, I am in accord with those who believe that patients are in more danger from the continuance of the disease than from the operation performed in the quiescent period.

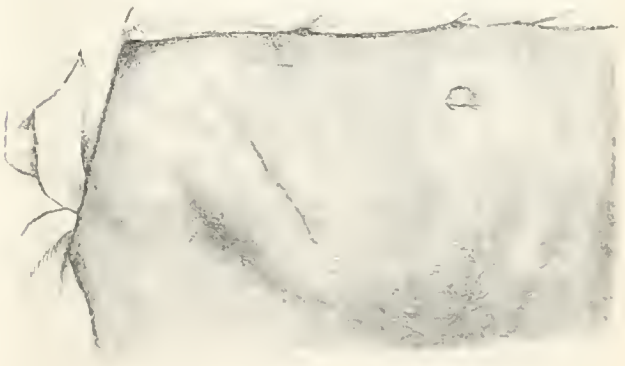


FIG. 1. Oblique Incision. Cicatrix three months after operation.

The operation you are too familiar with to warrant its description; but I wish to refer to one or two details which experience has proved the value of. In general I find the oblique incision (Fig. 1) preferable to the vertical (Fig. 2), one on the outer side of the rectus muscle; and have adopted the latter only when the tumor was near

[1] MEDICAL RECORD, April 26, 1890, vol. xxxvii., p. 479.
[2] Buffalo Medical and Surgical Journal, December, 1891, p. 207.

the median line. The oblique incision should begin about an inch above the middle of Poupart's ligament, to extend three or four inches upward and outward through a point midway between the anterior superior spine and the navel. More can be done with the same length of incision in this direction than in the vertical line. Five inches may be required in a thick abdominal wall. The shorter the better. Adhesions must be torn through with care, and cut only when very dense. The cæcum, when freed from adhesions, can usually be rolled over inside the cavity and retained in different positions with sponges, so as to present all its aspects. It is undesirable and rarely necessary

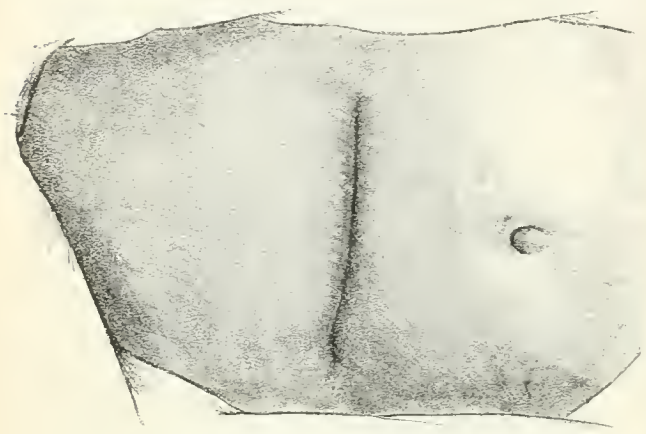


FIG. 2.—Vertical Incision; cicatrix six months after operation.

to pull it above the level of the edges of the wound. The appendix, recognized sometimes by touch only, is freed and ligated a quarter of an inch from the cæcum with two catgut ligatures, and cut between them. Another ligature embraces whatever exists of its mesentery. It is removed by cutting through the mesentery beyond this ligature. The cæcum is wedged about with sponges, the ligature removed from the appendix stump, the mucous coat pulled out with a hook, and its lumen constricted with a fine silk suture or ligature. The peritoneal coat is to be pushed back from it, and the tied tip pushed back (inverted) into the lumen of the cæcum. This inverts the peritoneal coat as well, and three or four Lembert sutures of fine silk through the adjacent wall of the cæcum close the circular opening in a longitudinal direction. This is the most perfect method of disposing of the appendix stump. I do not know who first proposed it. It is not always feasible, because of the thickness and cohesion of the coats. Under these circumstances the stump may be ligated with catgut, then depressed, and the cæcal walls closed over it with Lembert sutures. Use may be made of adjacent bits of meso-appendix or omentum, secured by catgut sutures to make this closure more effective. Iodoform should be dusted along the suture line. All bleeding must be stopped. A tent of iodoform gauze is to be used only when pus has been encountered. (Possibly the failure to employ this led to the one fatal result.) The abdominal wound should be sutured in layers, one each of catgut through the peritoneum and aponeurosis, the other of silk-worm gut through all the layers except the peritoneum. Boiled water is the fluid I have used for irrigation as a rule. With purulent foci, the field of operation has been mopped with 1 to 10.000 bichloride. The most stringent precautions have been taken to sterilize the skin, instruments, and hands.

Mural abscess has occurred in four cases; in but one, however, was it of large proportions. This case was seven weeks in hospital. Absolute primary union followed in six cases. In two drains were used without suppuration beyond their track. Two patients were discharged from treatment at the end of two and a half weeks, some at the end of three weeks, four between three and a half and six weeks—an average of about four weeks after-treatment. For future reference I append a list of the sixty-four cases already reported.

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Quénu	1	Ibid.
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Hadra	1	N. Y. Med. Rec., March 8, 1890.
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Hoegh	1	Jour. Am. Med. Ass., Nov. 2, 1889.
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Hume	1	Brit. Med. Jour., April 11, 1891, p. 803.
Gerster	1	N. Y. Med. Jour., 1892, vol. lvi., p. 216.
Bull	12	Present communication, 1 died.
Total	76	75 recoveries; 1 death.

PESSARIES AND CRUTCHES.

By GEORGE H. TAYLOR, M.D.,

[NEW YORK.

THE supposed necessity for so-called uterine "supports" is often enforced by the claim of analogy of method and of effect between the instruments thus used and those employed in case of defects of locomotion. The pessary and similar instruments with which the gynecologist is familiar, are held to represent very nearly the affixtures for limbs so well known in orthopedic practice; both being supposed to contribute alike to the restoration of the natural supporting power during the period of reparation of the defects for which they are provided. At a meeting of gynecologists which I recently attended, this view was enforced with much wealth of illustration and argument, not to mention dogmatic assertion; and as no dissent was expressed, the inference is natural that these views are in practical accord with those of the profession.

As this claim of analogy between the two classes of infirmities, though superficially plausible, is totally incorrect, tending to bewilder the unwary practitioner and to mislead him into the use of unnecessary and injurious methods, I am disposed to present certain opposing facts and statements which shall include not only the therapeutic devices mentioned, but also rational, physiological, pathological, and mechanical considerations, and the practical lessons derivable therefrom; and to invite a judicial estimate of their value.

The want of mechanical analogy appears when it is shown that the mechanical effects of the respective classes of supports are exactly opposite in the two classes of infirmities for which they are used. The crutch, cane, and affixture for defective limbs, serve to obviate compression of the disabled and supersensitive organs, by allowing the weight of the upper portions of the body to be transmitted to the ground through the artificial channel thus provided. The disabled limb becomes, in fact, suspended from above—not held up from beneath; is subjected to traction to an extent equalling its gravitation—not to the reverse action. Analogy with the pessary would require the supporting instrument to be under the foot, and sub-

jected to the gravitation of the parts above, since the pelvic contents are supposed to rest upon the pessary. An actual similarity of support of the limb and the uterus would require the latter to be supplied with suspensory support, which the pessary, its modifications and equivalents, are entirely incapable of affording. It is evident that the pessary and similar instruments only afford lodgement, not sustentation in the physiological sense. It is hence clear that the mechanical adaptations, as well as the action of the two classes of instruments, instead of being analogous, are quite the reverse.

The purposes of gynecological and of orthopedic endeavors are radically and irreconcilably dissimilar. Crutches and affixtures of diseased limbs operate to facilitate locomotion, obviate hazard from mechanical injury by undue compression of joints, and other diseased parts of limbs, and the pain arising therefrom; the whole organism, including the diseased portion, is enabled to engage in natural motory activities whereby the physiological deterioration certain to arise from motory defects is obviated or dispelled. The most potent factor of morbidity is thus antagonized. When lameness arises from traumatic causes, the assistance thus afforded is positively remedial; local and general indications are complied with, and the infirmity is advanced toward recovery.

Gynecological affections bear no similarity, either in origin or manifestation, to limbs disabled from injuries for which crutches and affixtures are required. The local injuries incident to accouchements, and those inflicted by gynecological surgery, may be thought to have a remote resemblance, but in these cases pessaries are confessedly inapplicable.

In those varieties of lameness having their cause, not at the point of manifestation, but in some systematic fault, the local affection is simply a mode of expression of the constitutional vice or defect. Of these, rheumatism, gout, scrofula, etc.—when so manifested as to restrict locomotion—are familiar examples. These and similar kinds of lameness are in their nature chronic, and necessarily continue parallel with their constitutional sources. Little or no truly remedial effects are sought or expected from crutches, etc., these are palliatives and makeshifts, whose influence have no extension to the source of the locomotive disability. Other means are universally employed for antagonizing the constitutional affection from which lameness proceeds. The abatement and removal of lameness in these cases depend entirely on the success of remedial endeavors directed to the source of the disability, over which no local palliative, however agreeable to the senses, has the least control; such remedies do not extend in the desired direction.

Should gynecological affections be found, on due investigation, to be classifiable in the chronic order, and to depend on constitutional causes, or at least on sources exterior to the pelvis, the seat of manifestation, an analogy of these with chronic cases of lameness would be obvious. But this analogy would lead to conclusions respecting remedies entirely opposed to gynecological practice, so far at least as relates to topical remedies. Remedial dependence would then be assigned to such remedies as are in their nature adapted to abate the source of the local manifestation, whatever form the latter may assume. Local palliatives would then suffer the not unjust suspicion of contributing to conceal the true nature of the affection, by suppression of its objective manifestation; thereby not only hoodwinking the sufferer, but reacting to hopelessly blind and confuse the prescriber's etiological, pathological, and therapeutic ideas. There can be little or nothing in the pessary and its congeners adapted to correct extra pelvic faults or defects. As a spring feeds a rivulet, so the constitutional source, whether this consist of mechanism, of function, or of both, insures an indefinite continuance of morbid manifestations, however the symptoms may be modified and the imagination stimulated by the assiduous local attentions of the gynecologist. The analogy of the fundamental sources of chronic orthopedic cases and those claimed by gynecology, therefore, tends to discredit the principles on which much of the latter practice is based. The considerations similar to the above indicate that the fundamental nature and sources of the kind of morbid manifestations classed as gynecological will bear further investigation. The name, gynecology, has an unfortunate therapeutic influence, inasmuch as it tends to confine attention to the locality of manifestation, to the neglect of the sources of morbid developments. A practice largely temporizing and palliative has thus naturally arisen, based on inadequate and practically erroneous conceptions, which flourishes in all civilized communities, and which has restricted power to diminish the infirmities to which it is devoted, or to contribute in the least toward obviating their recurrence.

The shortcomings and the positive errors of gynecology grow naturally out of disregard, verging on contempt, for the etiological factor of all varieties of pelvic disorders. Even though pessaries were abundantly capable of rectifying malpositions, dispelling congestions, pain, and all manner of consequences resulting from these conditions, nothing of permanent value is thereby secured so long as the affluent sources from which these proceed continue to reproduce the pathological consequences. It is irrational and unsupposable that disease, whether within the pelvis or exterior to it, is self-generated, independent, and without cause; yet there appears to be great difficulty in apprehending what ought to be self-evident, that morbid effects discontinue only by removal of their causes: and that due scientific regard for etiological factors naturally supersedes, as it also transcends, all other purposes of therapeutics.

It is well understood that vital tissues proceed from processes of growth, or functioning; vital forces are also another outcome of functioning. Disease can, therefore, be a consequence of incomplete and imperfect functioning. Functioning acts and processes therefore dominate such parts as depend thereon, whether near or remote. It is the physician's province, whether gynecological specialist or otherwise, to seek the functioning source of chronic maladies: this is liable to suffer neglect from over-mindfulness of objective local phenomena. This error seemed to pervade and control the deliberations of the gynecological conclave above mentioned. Causes and consequences, touching the condition of the pelvic region, appeared to be indiscriminately blended. Much stress was laid on the form of pessaries required for controlling the modes of obliquity, flexure, and depression to which the uterus is subject; on means adapted to allay pain, and to modify local conditions associated therewith, without a single word of reference to, or even the existence of, any etiological or dominating factor of their affections, by the removal of which these evidences and manipulations cease to exist. Without dissent the importance of immobilization was insisted on, the theory being that mutual contact of moving parts is injurious, and an impediment to restoration of local health. Similar views are doubtless expressed on similar occasions, public and private, by representatives of medical sects at war on other points of therapeutics. This fact proves the general acceptance of the theory of analogy between mechanical orthopedy and gynecology.

I need only refer here, for purposes shown further on, to topical treatment usually associated with the mechanical, addressed to the vaginal membrane, the cervix, the uterine interior, and the uterine body, including, in fact, all the easily accessible parts. Such medication, dictated by different theories, may be said to agree as to one predominant effect. This is to afford exit to superfluous and injurious local fluids, vascular and intervascular; inducing transfer to contiguous circulatory vessels, but more largely to the vaginal outlet of the pelvis. The relief thus secured, in the absence of more certain and better methods, appears to justify this class of expedients.

The real purpose of remedies in chronic pelvic diseases, as in all chronic affections, extends far beyond that of palliating disagreeable feelings, and the concealment

of obtrusive physical defects. Such purpose contemplates a return of the spontaneous, non-conscious, physiological activities to their efficient degree, and in their proper interrelations. As regards the pelvic contents and neighboring parts, nothing less radical constitutes health. If the uterus be pushed into place, straightened by a stem-pessary, and held in place indefinitely by the same means, possible in theory only, never in practice, the healthy relations are only counterfeited, not approached. The apparatus by which sustentation is normally effected remains disabled the same as before—indeed more disabled, since so far as artificial support supersedes functional sustentation, the physiological apparatus which effects normal support becomes neglected and falls into irretrievable decay and incapability.

So, too, respecting local pelvic hyperæmia and its multifarious consequences, ultimate and intermediate. If the superfluous fluids of the pelvic organs, or any portion thereof, be made to find exit through the vaginal outlet (the production of an artificial temporary catarrh is a favorite recourse of gynecologists), the causes of hyperæmia are in no degree removed, but continue undiminished since the operation of the physiological provision for normal drainage of the suffering region is untouched by this palliative recourse. The physical effect and physiological consequences are, in fact, the opposite of those sought. For local abstraction of fluids provides local space for further inflow through established channels, and for a re-establishment of the pre-existing hyperæmia, which is soon thereby rendered hopelessly constant. Pelvic hyperæmia and its progressive morbid consequences finds its remedy (as distinguished from palliation) only in one way. This consists in providing an adequate, trustworthy, and physiological outflow through pre-existing channels.

We may hence recognize the essential defect which at least contributes to the initial stage of the pathology of the pelvic region. The local venous fluids, including interstitial ingredients awaiting egress through venous capillaries, branches, and trunks, fail in securing such exit, and remain pent up in the distended capillaries, while certain fluid ingredients are forced into tissue interspaces, thus practically withdrawn from the aerating and renovating effects of the chemistry of the organism, and are compelled to suffer both chemical and organic, or morphological, deterioration, abundantly manifest as local disease.

The functional activities which dominate the return of venous circulation from pelvic and neighboring parts are therefore responsible for pelvic hyperæmia, and not the organs where the consequences locally appear. It follows that the varied stages of the morbid local condition are crude indications of corresponding degrees of incompleteness of the dominating function.

The vital error of pelvic therapeutics is the assumption that it is practicable to supply substitutes for defective nature, that is, physiological function, by remedies which have no adaptation or power to correct the fundamental fault. The essential defect, being in the domain of physiology, remedies which have intrinsic and permanent value, which shall really advance the interests of the sufferer, naturally require to be applicable to the fault itself, rather than to its consequences. Such remedies, when found, necessarily supersede the need of the endless palliative work to which the gynecologist is too often driven.

What, then, is the physiological state of the pelvic and neighboring viscera, to secure which is the true aim of the therapeutist? Just how is the correct position and proper interrelations of the pelvic contents maintained during health? It is evident that the correct answers indicate what is therapeutically required for restoring such mechanical position.

Again, just what are the processes which in health maintain effective and complete venous return or physiological drainage of the organs of the pelvic viscera? Knowing this, we also know how to provide such drainage; how, even, to exaggerate the process and thereby secure removal of accumulations arising from previous long-continued defects, even after local degeneracy of the parts has set in.

The first inquiry leads to a presentation of motory physiology as related to pelvic viscera. The uterus and associated organs are not supported from below, as is often assumed in practice, but from above. The mode of support is not that of a firm base or lodgement, or even fleshy inferior and lateral cushions, but by the continuous activity of apparatus specially adapted to the purpose of sustentation. The power and capacity of this inherent mechanism is superabundant, not only in health, but also for full compliance with all conceivable requirements and emergencies of malposition, acute and chronic, befalling the pelvic viscera. In other words, the motory mechanism which dominates the position of pelvic organs is readily convertible into a therapeutic recourse, far exceeding in power, availability, effect, and salutary consequences, all those usually pressed into the service of the gynecologist.

The correctness of these statements may be briefly indicated by the following considerations: Anyone may observe the to-and-fro, or oscillatory motion of the trunk, its cavity and contents in any example of the quadrumanial order of animals. This motion is rhythmic, coincident with respiration, extends quite through the cavity of the trunk, and includes the contents of that section of the cavity assigned to the rectum and germinal intestine—the pelvic portion. This motory action is also functional in the human subject, and in health it likewise includes the pelvic viscera. In case of the upright human species, the direction of this motion is nearly vertical; and inasmuch as the action is reinforced by certain voluntary motory acts of which inferior creatures are incapable in consequence of being supported by four, instead of two, legs, it is far more effective in the human subject than in lower animals.

These oscillatory motions are, in fact, changes of capacity, or fluctuations of the space included by the trunk-walls—these walls being practically mobile. The mechanical consequences depend on how the variation of shape is effected, where it is manifested, and to what extent it is produced. The motory act described may become a mechanical lift of the viscera, causing upward traction, with positive elevation of the pelvic viscera. The degree of lifting is increased by conjoining certain volitional acts, for example, that of twisting the trunk, ever so slightly, since this act diminishes the space at the inferior, while increasing it at the superior, portion of the trunk-cavity, thus urging upward the whole visceral mass to a corresponding extent.

Physiological motility of the contents of the pelvis and pelvic region is therefore an indubitable fact. It hence becomes evident that the vertical oscillation described practically antagonizes the effects of gravitation and neutralizes the compression which the inferior would otherwise suffer from superior and overlying organs. It insures spontaneous self adjustment of the visceral pelvic contents in conformity with their nature and the requirements of health, and obviates the possibility of even partial occlusion from exterior pressure of one organ upon another of either the blood vessels or tubular organs; while the full co-operation of the power of the abdominal muscles with that of the diaphragm and chest, insures the natural and healthful vertical direction of oscillatory movement, and of the sustentation described.

Now this organic fluctuation of the space within the trunk is subject to varieties of form and degree. The same motion also complies with the demands of respiration, but the demand of the latter may be fulfilled by change of space at the top of the chest, or at the upper or the lower portions of the lungs at either side, while the remainder of both the lungs and the inferior viscera may remain comparatively motionless. In either case the gravitation of the mass of digestive viscera, being unopposed, becomes a dead weight, compressing not only its own lower portions, but invading also the pelvic space; crowding, deforming, and displacing its several organs

and superinducing morbid consequences which are necessarily inevitable while the cause now described continues. It follows that the form of gynecological practice which restores and sustains the natural and wholesome mechanical relations of the inferior viscera is the commendable and indispensable form.

Those unfamiliar with physiological motility—the fluctuations of form and space characteristic of animal life—may be dubious as to the validity of the foregoing statements. To such the following considerations and facts may be presented. In case of the very lowest form of animal life, the amœboid, change of form, and therefore of interior space, is its expression of vitality; its means of locomotion, digestion, etc. In higher animals, this special form of motion, as manifested by muscle, is indispensable for nutrition, and, consequently, the differentiated products and results of nutrition.

The superabundant adequacy of the mechanism of the lifting apparatus, on which normal sustentation of the pelvic contents depends, is seen in the following:

The fluctuations of chest-space in respiration are stated in works of physiology to range ordinarily from twenty to thirty cubic inches, but under strong effort are easily increased to two hundred and fifty cubic inches. Under cultivation, men of moderate size have acquired power to change three hundred and fifty cubic inches of air at a single respiratory act. But increase of air respired does not much increase that portion absorbed in the lungs. What, then, is the purpose of this enormous capacity beyond that necessary or utilizable for respiratory purposes? We shall see.

The mechanical disposition of the muscles of chest and trunk, as respects attachments, direction, insertion, etc., is such that their united power is available to increase the degree of the fluctuation of space above described. For contraction of muscles covering the chest increases the space at and immediately below the diaphragm; contraction of muscles of the abdominal wall diminishes the space beneath; while simultaneous contraction of all these muscles renders the two consequences coincident and urges the visceral mass contained therein with great force to a more elevated location. Such action promptly occurs in obedience to the will, and is spontaneous in ordinary occupations.

The amount of force of upward traction thus at ready command, converging in the pelvic cavity and contents, may be mentally conceived by comparing the power of the muscles of an arm in the act of lifting a weight, with many times the amount of muscle engaged in simultaneous expansion of one part of the trunk-space, and contraction of the remaining portion. Nearly all the muscular coverings of the body are engaged in the latter process, the combined lifting power of which should equal many times the lifting power of an arm.

The mechanico-physiological power of the apparatus to which is assigned the function of maintaining and restoring the position of the inferior viscera admits of more direct illustration. The diaphragm may reasonably be compared to the piston of a mechanism, as a pump or engine, of a superficial area of say one hundred and fifty square inches; while the superficies of the superior strait of the pelvis may, for the purpose in view, have fifteen square inches. From these premises it is plain that an upward movement of one-quarter of an inch of the diaphragmatic piston (the anterior wall of the abdomen co-operating) will necessitate an upward movement of the whole mass of pelvic contents more than two inches—a vacuous space is the only alternative.

The succession of tractile impulses operating from above insures the straightening of the organs, and maintaining their proper anatomical form—an effect exactly opposite that sought in the use of pessaries, for at best the latter instrument can only crowd the pelvic organs more compactly against the immobile digestive viscera and the firm walls of the pelvis.

The degree of the suspensory and tractile force ordinarily engaged in the physiological process must be conceded to at least equal the resistance, which is chiefly the avoirdupois of the pelvic contents and the inferior portions of the digestive organs; since failure of its adequate action is infallibly signalized by some form of impairment of the local health of these parts. But the ordinary process characteristic of health is susceptible of enormous increase, rendering the function adequate to any mechanical emergency or malposition which, by any means, may be imposed on the pelvic and neighboring organs. The increase secured by muscular co-operation is adequate to correct any malposition of the organs within the pelvis and in its neighborhood. Such increase is caused by means of favorable positions, specially devised motory processes or exercises, the addition of power from the hand of a skilled assistant, or a combination of these agencies. Almost any mechanical obstacle to replacement of pelvic organs, including those to which the intestine is subject may, in this way, be overcome. Practical instances may be shown in cases of divulsion of adhesions in old hernias, in retroflexion and other fixed morbid locations of pelvic organs, in prolapse of the rectum, and other mechanical faults, otherwise irremediable.

The efficacy of the application of the same principle is also shown in the results often attained by the treatment, for example, of uterine prolapse, for the palliation of which the pessary has been employed. Should the pessary be allowed to remain, an inch or more of separation will be found on examination between the instrument and the uterus, thus demonstrating the inutility and needlessness of the instrument.

The agency described has another very nearly related function indispensable to health, whose faults are certain to inaugurate and continue local disease of the pelvic organs, remediable in the radical sense only through restoring the function, and affording it such temporary increase as the special nature of the case may require. The function referred to is that of returning the venous circulation from the visceral, and especially from the pelvic organs.

The fluctuations of space within the trunk-walls is necessarily accompanied by corresponding fluctuations of atmospheric pressure, and of compression of the abdominal and pelvic contents. These alternations of compression exercise a profound and very important mechanical influence on the contents of the nervous trunks conveying blood, against gravitation, from the visceral organs toward the chest. The process described infallibly urges these fluids from the viscera into venous channels and upward in a continuous stream. The motory consequences extend to the venous radicles of the pelvic organs, and through them to the interstitial fluids of every quality by which these capillaries are surrounded.

Anyone desiring proof of the power and the remedial efficacy of the physiological principle above shown may easily supply himself therewith. Let the inquirer make application of it in cases where he can have the testimony of his senses, as, for example, hemorrhoids, varicocele, menorrhagia, dysmenorrhœa, and similar cases in which the evidence afforded is direct and complete; but best of all, strangulated hernia. In the last mentioned case the experimenter will be able to both see and feel the rapid shrinkage of the hernial sac, produced by the aspiration or sucking out of its fluids into the radicles of the abdominal veins, while the shred-like tissues remaining in the sac glide back into the abdomen spontaneously.

The physiological purpose of the agency described is not merely mechanico-physical, but includes the potent chemical physics of the whole organism. This physiological agency not only drains the pelvic viscera, thus allowing fresh arterial blood to pursue its course, washing out, so to speak, the superfluous ingredients of the over-distended vessels and interstitial fluids, but submits them to the chemistry of the whole body. The unstable, local, deteriorating and offending materials are in this way reduced to stability, and practically and permanently removed.

The mechanical principles having this end in view may require illustration. The fluctuations of trunk space incident to normal respiration are comparable to the piston of a pumping or other engine, where a powerful stream is, by a proper arrangement of pipes, made to flow from any source of supply, and transferred to a higher point. The upflow is the essential preliminary to further inflow; the latter is retarded or prevented whenever the former is.

We may now understand the controlling importance of fundamental principles. Pathology is at least conceivable as imperfect or perverted physiology. The distinction between perfection and perversion is too obscure for recognition in its first stages, but increases with advanced degrees of the latter till their interdependent relationship is unrecognized and undenied.

No characteristic of morbid states of the pelvic contents is more obvious, constant, and fundamental than hyperæmia. This appears to be the starting-point as well as the concomitant of a multitude of widely divergent pathological states, affecting organs and parts of organs having differing functions. Hyperæmia is an essential preliminary alike of hæmorrhoids, leucorrhœa (or catarrh), menorrhagia, abscess, and local hyperplasias of different kinds, to say nothing of the more advanced stages of these appearing under new names. This statement is confirmed by the efforts of gynecologists to remedy local hyperæmia and abate its annoyances, and to suspend, however transiently, its connection with the powers of consciousness.

But hyperæmia of any part of the pelvic organs is a term expressive of defects and incompleteness of the local physiological drainage of the suffering parts. Retarded flow of the contents of venous trunks obstructs the outflow of radicles, capillaries, and interstitial fluids of pelvic viscera, produces local states, superinduces chemical and morphological deterioration, and restrains all such ingredients from the advantage of the vito-chemical physics of the organism.

The physiological principles above presented are as old as the sun, and cannot admit of serious question. Their application to therapeutic ends looks simply to the restoration of defects of function to their normal standard, a purpose which can afford to omit intermediate purposes. The only point of possible cavil must relate to the extent to which therapeutic effects are attainable through physiological channels; and where other remedies, which, under the light afforded in preceding statements, assume the rôle of palliatives, may be advantageously omitted. Conviction respecting these particulars can arise in the inquirer's mind only from personal observation of the results of the application of the principles above pointed out; conjecture has no place in this inquiry. Let the earnest seeker of facts discover, if he can, a single instance of malposition, acquired deformation, morbid fixity, or other morbid mechanical affection of the pelvic contents, including neighboring viscera; or of hæmorrhoids, blind and bleeding; prolapse, including disease of rectum; prolapse, including all deviations of form and position of the uterus and its annexa (ovaries and tubes); swellings; degeneracy of all forms, as hyperplasias of these organs, catarrh, ulceration, abscess; faults of function, as dysmenorrhœa, menorrhagia, shortened periodicity, etc., and the nervous complications necessarily associated with these specific and local manifestations—in which the spontaneous mechanico-vital functioning, to which attention has above been called, is not and has not been faulty, in direction or degree, or both.

To afford the greatest practical encouragement to investigators in the line of inquiry pointed out in this article, and opportunity to disprove or verify the fundamental principles stated, I will relate my earliest personal experience in a case which occurred thirty-three years ago, and suggested those which followed:

A gentleman, about fifty-five years old, of eminent social standing, being a member of the judiciary of this State, presented himself for relief from obstinate prolapse of the rectum, which had proved refractory to the efforts of several preceding physicians. Not only was a portion of the gut very promptly extruded, to the extent of an inch or more beyond the sphincter, by every attempt at stool, but the accompanying irritability gave the affection the characteristics of a diarrhœa—the straining and apparent desire to evacuate the bowels being almost constant—causing as frequent necessity for its manual replacement. There had been but little intermission of this experience, night as well as day, for a prolonged period. I must confess that, on learning the medical history and its inconsequential results, I was far from hopeful, since I could do but little more than follow the beaten paths of medical literature and traditions. I rang what changes I could for a few days with local and with constitutional incitants to contraction, with the same absence of result as had marked previous endeavors. It then occurred to me that what was really needed was the *pulling in*, rather than pushing in, of the extruded part; that the visible, ostensible feature did not in fact represent the actual weakness, but only showed the consequences of defective sustentation—probably of the interior continuation of the intestine. On this hypothesis neither pushing in nor local contraction could avail as remedies, since the seat of the difficulty remained uninfluenced thereby. Had we been punishing a blameless part for faults which really pertain to a different location? Could the mass of digestive organs be so raised as to pull in their recalcitrant rectal extremity?

Thus debating possibilities, I asked my patient to so turn himself as to lie face downward in bed, the pretext being that of further examination. I then requested him to rest his whole weight on his elbows and toes—carefully placing the arms and the feet perpendicular to the couch. The next request was for him to make such exertion as would cause the trunk to be horizontal or even more elevated, and to hold that position. At the moment of his compliance I distinctly saw the extruded portion of intestine quickly glide through the sphincter and disappear. My hopes were gratified. My patient uttered strong expressions of relief and thankfulness. A ready and easy way of elevating the viscera belonging to the lower portion of the cavity of the trunk had been employed, capable of permanently remedying this displacement. Could the principle apply to other kinds of morbid position?

An analysis of the mechanical phases of the process described presents the following points: In the position described the side-walls of the chest are immobilized, whereby the fluctuations of interior space coincident with respiration are compelled to travel by way of the diaphragm, and reach the exterior through the walls of the abdomen, thus subjecting the whole visceral mass to the same degree of motion. At the instant of effort the side-walls of the chest are pulled asunder, necessarily causing increase of the space in the diaphragmatic region, and the abdomen contracted, causing diminution of that of the inferior portion of the trunk, the two effects being coincident. The act consequently urges the whole visceral mass toward the diaphragm, and causes immediate and forceful recession of the rectum—this being strongly pulled inward and upward.

A moment's reflection showed that a variety of other actions and positions would contribute to the same result; and I at once instructed my patient in such processes, including a select variety of positions combined with such moderate action as he could easily practise by himself, and which would tend to produce similar agreeable as well as remedial effects. He became duly aware that, though the objective manifestation was local, the essential defect was elsewhere; and that such practice as strengthened the sustaining apparatus was indeed curative, since its effects were those of development rather than mere palliation. The immediate symptom was not merely pushed out of sight; its cause had been obviated and the effect rendered impossible.

The next morning my patient informed me that he had secured complete control of the troublesome segment of his anatomy, it having meanwhile shown no disposition to

stray from its bounds; and as he felt well in other respects he had determined to visit friends in the vicinity till assured of the permanency of his cure. No further attention or advice was required.

As further experience subsequently demonstrated, the malpositions to which the contents of the female pelvis are liable are no less amenable to correction on the same general principle above shown. It was only necessary to cultivate the sustaining function of the physiological apparatus by means adjusted to the special condition of the patient. It was also found that no less decided and desirable remedial effects were attainable in chronic local diseases of the organs, embracing a large share of those forms which occupy the attention of the gynecological specialist.

The matters claiming principal attention in this article may be summarized as follows:

Freedom of movement, as opposed to fixation, is the natural and healthy condition of the pelvic contents and associated parts in both sexes. The organism includes a powerful functioning apparatus whereby such motions are propagated, not only through the chest, for respiratory purposes, but also through the viscera of the abdomen and pelvis, the purpose here being that of sustentation, as relates to the various organs, and that of transfer to the circulatory centre, as relates to venous blood. The mechanical effect in the latter case extends to the venous branches, capillaries, and even to the interstitial fluids of the pelvic organs, which are thus removed from their otherwise pent-up condition and are restored to the circulation.

Pessaries and similar instruments, having no reliable base of support, cannot hold up the uterus, since this effect necessarily implies the sustentation of the much greater weight of the overlying digestive organs. Pessaries cannot promote motory functioning of the sustaining vital apparatus, but hinder it, and are therefore prejudicial to the purpose for which they are used.

The motor functioning of the vital apparatus is, by tact, art, and cultivation, susceptible of such increase as to remove the consequences of its prolonged defectiveness.

SOME CONSIDERATIONS ON THE SELECTION OF CASES OF PULMONARY TUBERCULOSIS SUITED TO THE HIGH-ALTITUDE TREATMENT.

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THE high-altitude treatment of phthisis and its triumphs, although still unheard of by perhaps thousands of physicians practising in the United States, is nevertheless of sufficient age as a mode of treatment and sufficiently established in the confidence of many medical writers and thinkers to have made some reputation for itself.

Furthermore, scores of communities in every State have heard of this or that citizen of their town who has gone to Colorado and been, apparently, cured of consumption. In these various ways some knowledge of the benefits of high altitudes in such cases has at last come to the ear and mind of many busy physicians in various parts of the country and the resolution made to "try it" on some case. The writer desires to convey a few brief ideas which, without any attempt at scientific classification of cases, may assist in rendering these trials of high altitude useful, or at least not productive of harm. In the first place, when one as a physician hears of this or that case which has gone to Colorado and been remarkably benefited, he should not draw the inference to put into practice on his next case of phthisis that Colorado or any other place is a specific for phthisis in every form or stage. One certainly would not be so credulous about some new remedy which was alleged to be a specific in certain ailments, and the same exercise of common-sense is necessary here. How often is every physician in general practice consulted by some person in the first half of adult life about a cough that has lasted several weeks or perhaps months. Although the patient's general appearance may be that of health, of what use is it for us to deceive both ourselves and him by calling it a cold, or, at most, a case of rather troublesome bronchitis. Persons between fifteen and forty or forty five, otherwise healthy, don't have bronchitis of this chronic character. It will perhaps be answered that it is proven that they do, because they get over the cough and are not troubled with it again until the next winter or spring. My reply would be that it nevertheless is not bronchitis, but a case of incipient tuberculosis, or perhaps more advanced tuberculosis, that for the time has become latent or inactive, and that, furthermore, it is in exactly that stage in which any effort toward cure by climate must be made. It is just such cases as these, which are in their very incipiency, and which the physician and the family both refuse to regard as "lung trouble" of a serious kind, that are enjoying a golden opportunity never to be recalled. Nature is still on their side, as shown by the occasional disappearance of the cough for a longer or shorter interval and the absence of fever. But, the physician says, there is no dulness, or any physical signs of mischief in the chest. Very true. There may be none discoverable, but ask the chest specialist or consult your own knowledge of physics and learn to what extent a discrete or even a deeply seated localized tuberculosis can exist without affecting resonance. The same is true of auscultatory signs, and we may as well face and acknowledge the fact that while physical exploration of the chest teaches us much, and is indispensable to the intelligent practice of our art, it is, nevertheless, in a large proportion of these cases, wholly inadequate for the purpose in hand. Sputum examinations to determine the presence or absence of tubercle bacilli, while very valuable as affording early evidence in these doubtful cases, still leave much to be desired, for the reason that the examinations are so often negative in just those cases in which it is so desirable to have positive evidence. Furthermore, comparatively few physicians have had sufficient training in making these examinations to feel like undertaking them. As a result of the above state of affairs and the delay in sending cases away after they are recognized, we are constantly seeing cases arrive in Colorado that it is nothing short of cruelty to send from their home and friends at a time when all the comforts of the former and ministrations of the latter are needed to smooth their path to the grave. Consider thoughtfully the obvious impropriety of advising a man with one or more large cavities in his lungs, consumed with hectic fever, and a constitution broken beyond hope of reaction to the changed conditions, to go to Colorado, to an altitude of six thousand feet. The unhappy but easily to be foreseen result is that the poor man not only does not get the relief that he and his friends, prompted by their physician, had confidently expected, but, on the contrary, on arrival there, is barely able to inhale sufficient of the rarefied air to meet his immediate requirements, and the poor victim of mistaken therapeutics literally gasps out a more or less protracted existence of a few weeks or months. In this way the principle of treatment by high altitudes, which if properly utilized can be made to save thousands of lives now lost annually, falls into undeserved disrepute, and the extension of a knowledge of its great value is delayed—"delayed," for the truth is bound to triumph ultimately. If such cases as the above must be sent from home, as we sometimes think here, to rid their home physician of the annoyance of their presence, they should be sent to Florida or Southern California, where they may at least be chloroformed off into eternity by a soothing climate and not suffer an actual shortening of their days from a climate acting on a radically different principle and entirely unsuited to them. Such cases on their arrival here, and on being told by the new physician whom they have just consulted something of their real condition, frequently

say, "You must be mistaken, doctor; my physician at home told me I only had a little bronchial trouble, that I should be all right in a few weeks after I got to Colorado."

As a case in point the writer recalls an instance of recent occurrence where a well-known throat specialist sent a patient here suffering, so the specialist told him, with a little bronchitis and some throat trouble. Examination revealed the presence of a large cavity in one of his lungs and active tubercular laryngitis with ulceration. He died in three weeks. Such instances could be multiplied *ad infinitum*, but space forbids. When the profession realizes that it has in the high altitudes of Colorado not a cure for advanced consumption, but practically a specific for the earlier manifestations of the disease, then will the climate of these elevated regions be put to its proper use, and further, when each member of the profession does his duty, later forms of this disease among those able to avail themselves of climatic change will become rare, and will be looked upon as instances of inexcusable neglect on the part of somebody. Some one may ask whether a climate so useful in the early portion of the disease is without utility in more advanced states? The reply would be that so long as a fair amount of constitutional vigor is left, and the system shows a good degree of tolerance of the tubercular process, as evidenced by a good pulse and comparative absence of fever, there is hope for benefit even at an advanced period of the disease; but it must be distinctly borne in mind that no climate can restore lost tissue and render *nil* the consequences of such loss, that the most that can be hoped for in these advanced states is an arrest of the disease, more or less complete, and that the patient will always suffer from the effects of its past ravages. Hence one reason of the extreme desirability of taking the disease in time before structural changes are so extensive as to render a return to health and an active, useful life well-nigh impossible. In the consideration of these more advanced forms of the disease it may be well to state that not so much depends upon the stage as upon the degree of tolerance or tendency to chronicity. In Colorado, as elsewhere, a third-stage case, showing no activity, will often outlive a much earlier but active case. Of course the earlier a case the more the chance of changing its type from acute to chronic, and so securing time for the supplementary action of climate.

Another source of surprise and disappointment traceable frequently to an entire misconception of the subject on the part of the patient's home physician is the expectation that two or three months' residence in Colorado will suffice for a cure. It is a great mistake to hold out such illusive hopes.

Phthisis, in its curable forms, is a chronic disease and one that usually owes its real inception to nutritive faults of years' standing. Is it, then, reasonable to suppose that its eradication can be effected by other than a continuance of the means for a considerable period. In this way only can the patient's local and general nutrition be so altered as to acquire that degree of integrity which is necessary to render him immune to relapse or fresh invasion. Other points to be considered are the presence of certain of the complications of tuberculosis. It is seldom wise to send a case to Colorado in which there is much laryngeal involvement. Such cases, unless they are quite decidedly sluggish in character, seem to me to pursue much the same course here as elsewhere. It is but fair to say, however, that there is some difference of opinion upon this point. Cases in which the intestines are much involved also seem to do poorly; but it should be borne in mind that by no means all of the diarrhœa of consumptives, even when chronic, is of a tubercular character, and that the diarrhœa due to intestinal catarrh and lack of tone is likely to receive prompt benefit.

A tendency to hemorrhage is no contra-indication to the high-altitude treatment, but, on the contrary, seems to be rather favorably affected than otherwise, and its appearance is always fortunate, since it early advises us of the nature of the process. In some cases it might be advisable to break the journey once or twice and thus come to high altitude gradually, and so obviate any danger incident to sudden change of elevation.

The central and all-important fact to be borne in mind, then, is that an early diagnosis and departure for the high-altitude region is absolutely essential, and that the prospects of a favorable outcome in an individual case will depend upon the success with which this is accomplished. We may even make so strong a statement as this, that a cure of this much and justly dreaded disease is, except in rare instances, certain if the sufferer only gets an early start. One who studies this disease at a health-resort is almost forced to believe that physicians generally forget that this, like other diseases, has an early stage, and that they are not obliged to wait until their patient presents the appearance of a typical hospital consumptive before making a diagnosis. Don't fall into this error, but regard all cases of cough that last unduly in young adults with suspicion. Better make a dozen mistakes on this, the safe, side than one on the other.

In closing, a few remarks on the subject of resorts for sufferers from phthisis, from the stand-point of one who has himself been a sufferer from the disease, and hence taken an active interest in the study of climates proposed for its cure, may not be without interest. These resorts may, for our purpose, be divided with propriety into three classes, according to the altitude—low, medium, and elevated regions. In the first class I would include such resorts as those in Florida, Georgia, and Southern California, in this country, and some southern portions of France and Italy abroad. Under the second heading such resorts as Ashville, the Adirondack and Catskill mountains, with an elevation of from fifteen hundred to twenty-five hundred feet, would properly find their place: while the elevated plateaus, with an altitude of five thousand feet and above, extending along the slopes of the Rocky Mountains from Wyoming down into Arizona, in this country, and such stations as Davos and St. Moritz, in Europe, belong to the third and last class. Each of these numerous localities has its value in meeting special indications, but like some good drugs at our command, they are very often misprescribed. To send, for instance, a case of early apex disease, which is as yet in a state of fairly good general health, and in which no contra-indication to the high-altitude treatment exists, such as valvular disease of the heart, to a resort of the class first mentioned, is betraying an ignorance of the resources at our disposal in such cases and jeopardizing the interests of the patient to an extent which should properly furnish grounds for a malpractice suit. That the climate of this class of resorts is purely palliative in its effects and possesses no really curative influence, is a point abundantly proven by the results of years of experience all over the world in the old routine practice of sending phthisis cases South, and furthermore, by the fact that a study of the vital statistics of these Southern resorts shows that other conditions, such as density of population, character of prevailing occupation, etc., remaining the same, no immunity from the disease exists among the natives, but, on the contrary, the death-rate from consumption shows practically the same average that obtains elsewhere. Thus we find that the death-rate from pulmonary phthisis in Italy is as high per thousand as that in the city of London. That a first-stage consumptive, engaged in office work in New York or Boston, sent to Florida, will generally for a time be greatly benefited, no one will dispute. He would be equally benefited if he were sent to Norway or a farm in Connecticut. The influential factor here is change. It is for the later stages of the disease that a climate like that of Southern California or Florida may be prescribed with propriety. A troublesome cough, with perhaps some fever and sweating, now harasses the patient continually. Here warmth and equability, curative though they are not, add greatly to the patient's comfort, and indirectly prolong his life. The results obtained at resorts possessing a medium elevation demonstrate amply that they are distinctly superior to the low resorts just considered,

for consumption in its curable forms; but when we come to consider the reason for this superiority, we are forced to the conclusion that it is by virtue of their elevation, this and its incidental consequences being the only distinctive features of their climates. In arriving at this conclusion we deprive this class of resorts of their principal reason for existence as health-resorts for the affection under consideration, since altitudes of a much more efficacious degree, combined with far more agreeable and useful minor climatic features, are to be found elsewhere. The Adirondack and Catskill regions might be said to answer a useful purpose in affording facilities for a climatic treatment of some value near to the large cities, and hence available to many who would otherwise be obliged to do without it altogether, and also as furnishing good places of resort for those who, for any reason, cannot stand higher altitudes, but the range of their utility must, apart from these practical considerations, be a decidedly restricted one. Localities with an altitude of five thousand feet or more, which possess a good share of other climatic virtues such as a comfortable mean annual temperature, a good degree of atmospheric and soil dryness, a large amount of sunshine, conditions which invite the fullest amount of out-of-door life in those sufficiently vigorous, exhibit to perfection the possibilities of the altitude treatment. Here the curative influence differs as radically in character from that alleged to exist in southern resorts as a tonic does from an opium anodyne.

A marked degree of atmospheric attenuation substitutes in a steady and continued physiological manner pulmonary action for the functional inaction and nutritive decay of the tubercular process, while the dry and aseptic air checks the coincident suppurative process.

PEMPHIGUS WITH POLYMORPHOUS ERYTHEMA.

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In consulting well-known authorities for the treatment of the following case of pemphigus which lately came under my care, I was struck by the lack of harmony in their views and methods, and extending my investigations to the writings of all the prominent authors at my hand, was surprised and even startled at the great diversity of opinions advanced as to its etiology and treatment. This has led me to give close attention to the present case, and to record my observations in full:

It is a rare disease, even in France, where skin diseases abound. Hebra says: "In my clinique at the General Hospital in Vienna, I have, in the course of rather more than twenty years' practice, out of a total of twenty-five thousand patients annually, seen forty cases of pemphigus."

In examining attentively all that I can find written upon the subject, I am impressed with the idea that, with the exception of a few particular facts, the principal parts of the papers are based upon other observations than those of the authors, and in the cases noted there are incomplete descriptions of the history of the patient, great confusion in opinions hazarded as to the cause, and the most direct contradiction in the remedies advanced with confidence for the treatment of the disease; and in many instances the symptoms of pemphigus are confounded with those of complicating maladies.

The etiology based upon these observations differs, as might be expected, very widely. Some authors contend that the disease is contagious, epidemic; others that it is sporadic; still others, that it is always symptomatic. For some nosologists pemphigus is an eruptive fever, for others, a cutaneous phlegmasia; and finally, others class it among the cachexiæ, the hydropsies, etc. Some observers believe it to be a dangerous disease, with a large percentage of mortality, while others hold that it is benign, and where uncomplicated terminates always in recovery.

The principles of treatment are as diverse as the descriptions of the malady: diuretics and hydragogue cathartics, as opposed to tonics and full diet; opium, mercury, arsenic, sudorifics, emetics, immersion for long periods in warm baths, *vs.* total cessation of bathing, even of the face and hands, with local applications of ointments and powders. One cannot but conclude that the disease is one of which little is known.

Mr. B——, twenty seven years of age, came to me for treatment of an eruption which had first appeared the day previous, and which I discovered to be that of acute pemphigus. His father had died at the age of fifty six of a submaxillary cancer of the right side. His father was one of a family of ten children, one other of whom, a sister, died also of cancer; four of the ten were still living, aged between sixty and seventy. His mother died of some disease of unknown character. She was one of a family of seven, of which four are still living, aged between fifty and sixty. The patient has always had a sensitive stomach, and suffered from nasal catarrh since childhood. For the past ten years he has had no illness whatsoever; in the autumn of 1890 he was much debilitated from overwork, and in November caught a severe cold which resulted in pneumonia, and confined him to the house for fourteen weeks. On June 1, 1891, he was seized with influenza, which quickly culminated in an otitis of the left ear, and has resulted in almost complete loss of hearing on this side. On June 20th he sailed from New York for Europe. He had been troubled with a cough more or less constant since the attack of pneumonia, but this has almost disappeared since the sea-voyage. He gave no history of late unusual excitement or emotion, but has of late been much fatigued from sight-seeing and visiting galleries. He has a rather cadaverous appearance, sallow complexion, and noticeably anæmic, of slender build, tall, and somewhat stoop-shouldered.

On physical examination I found the heart normal; lungs normal, except slight dulness at base on left side; liver and spleen slightly swollen. Analysis of urine showed it to be clear, of amber color, without deposit or unusual odor, reaction feebly acid, sp. gr. 1.019. Microscopical examination disclosed no morbid changes other than numerous crystals of earthy phosphates. Application of heat and nitric acid produced no change, and it was not affected by Fehling's test, neither did it cause any deviation in the plane of polarized rays of light through the spectroscope.

Urea	17.20	grammes	per litre.
Acid phosphoric	1.95	"	"
Chlorides	14.20	"	"
Acid uric	0.48	"	"
Total solids	39 60	"	"

He sleeps well, has a good appetite, and complains of nothing but the eruption, which causes him no discomfort other than the feeling of protruding swellings upon the surface, excepting in the mouth, where are two phlyctænula upon the hard palate, and one on the right anterior pillar, and one on the posterior pillar of the fauces which are painful upon swallowing.

Mr. B—— called upon me Monday, July 13th. Wednesday previous he noticed a pimple on the scalp and picked it; at the date of his first visit it presented a pulpy, crumbling, yellow crust. On Friday the 10th he thought he had a chill, but noticed no fever after; no nausea, the appetite remained good, and he felt no derangement until Sunday the 12th, when he began to feel nauseated, but suffered no loss of appetite. During the day and night there appeared a dozen or more blebs over the back of the neck and shoulders. On the 13th I found a number distributed over the face, thoracic and abdominal walls, arms and hands, with a number of hard, tumefied spots to be the base of others to come. Some of these tumors were red over their surface; they were not sensitive to pressure; the rubefaction in some was confined to the centre of the surface of the tumor, in others it extended completely over the base. Between some of the closely approximated vesicles the rubefaction extended from one to the other, and some of the larger bullæ threw out ra-

diating red lines apparently following the track of the vessels supplying the parts.

Considering each vesicle individually it presented the following début and metamorphosis, which for the simplification of my observations I should like to divide into four epochs:

1. Invasion, characterized by the successive development, more or less rapid, of tumefaction, heat, pain, rubefaction, and vesication.

2. Augmentation, being the period of enlargement of the phlyctenula.

3. Decretion, characterized by the reabsorption of the vesicular fluid, or rupture of the vesicles and effusion of their liquid and denudation of their base.

4. Desiccation, the formation of the scales or crusts and with their fall the disappearance of all the cutaneous symptoms.

Each phlyctenula rested upon a tumefied base of greater or less extent, limited in depth to the corium and in extent to the capillary plexus it covered. Nevertheless, in some instances the subcutaneous cellular tissue was invaded, notably when the phlyctenulæ were closely grouped in any one region; the close approximation of several vesicles and coalescence of the tumefaction involved the whole integument and extended to the rete, while in other parts the tumefaction was of so superficial a character as to be hardly perceptible to the touch. The surface, which was the seat of the eruption, was hard, tense, resisting, of higher color and temperature than the uninvaded parts.

The tumefaction, in most instances, was of a wet, sharp limitation, and the border around the base of the vesicle was the most pronounced. The swelling augmented rapidly to the point where the transuded fluid lifted the epiderm to form the bulla, and commenced to diminish during the enlargement of the vesicle, but was not effaced until the desquamation of the desiccated crust. The heat and pain varied greatly; in the development of some of the vesicles it was absent, in a few of the larger ones, excessive. Where the vesicles were closely approximated the heat would extend to the intervening uninvaded integument, but the pain was confined in every instance to the base, and limited by the extent of the tumefaction. The heat appeared with the swelling, which, as a rule, had no tenderness until the elevation of the vesicle. In the formation of some both heat and pain were absent, but the pain manifested itself only when preceded by heat. Neither of these symptoms was as intense as that which accompanies a phlegmon—not so constant and not so profound. The pain first presented in form of a prickly sensation, sometimes pruriginous in character, changing upon the formation of the vesicles to a dull aching, not, however, of sufficient intensity to disturb the patient, except when the bases of the vesicles were denuded or the exudation adhered to the clothing.

The rubefaction accompanied the swelling and extended to its borders, forming plaques, round or oval, of variable size. Often only the border was to be seen, the centre being already covered by the vesication; then it appeared only in the form of an areola of greater or less extent, sometimes almost imperceptible; in some instances the vesicle covered the tumefied base to its extreme limit, and this possibly accounts for the statements of some writers that the pemphigode phlyctenulæ are formed without preceding rubefaction, but it nevertheless exists, as is shown upon the rupture of the vesicle, which brings to view an undoubted redness. It is very different in character from the erythema of erysipelas: of a pale red at the beginning, changing to a darker and more venous hue as the swelling progresses; the color disappears very little, if any, upon pressure at its début, but with the increase of the œdematous swelling it is affected the same as in erysipelas.

The rubefaction diminishes in ratio with the scabbing, but does not wholly disappear until some days after the falling of the scales or crusts.

Upon all the points affected by tumefaction the presence of a certain quantity of transuded liquid detaches the epiderm from the corpus mucosum, and elevates it into small vesicles which may be compared, without a point of difference, to blisters resulting from the application of boiling water, or a vesicant, to the skin. The form of these blebs varied in size and shape, but in character of their liquid contents and color they were the same. Seen at the moment of their début they constituted upon each erythematous plaque an extended, flattened, convex vesicle like a hydatid cyst or a watch-glass applied to the skin. These vesicles had no red or white points similar to a papule or pustule, and neither of these last could possibly be mistaken for the vesicles or phlyctenulæ which belong alone to this exanthema.

They were in every instance filled with a translucid, clear, straw-colored fluid, filling and enlarging quickly, stretching their covering to an appearance of bursting, and extending slightly out over the point of their attachment at the base. This appearance continued during the period of their enlargement, which occupied from one to three days, and upon arriving at the point of greatest distention some of the larger vesicles showed irregularity of contour and form, one border being elevated above that of the opposite side and showing greater distention by the imprisoned fluid.

Following the application of the oil prescribed, the vesicles commenced after a few hours to change as regarded the color of their contents, being first opaque, then reddish-yellow. With the change in color the bullæ commenced also to change in form. While they were enlarging, and until they had arrived at the point of greatest distention, they were convex, of bulging appearance; they now commenced to flatten and shrivel or wrinkle, flattening unequally, and forming at the most dependent portion a sort of pouch of liquid.

Their volume varied from the size of a pea to that of an almond, and in one instance, where several vesicles were closely approximated and coalesced on the abdomen, near the umbilicus, they united to form a bulla of irregular, oblong shape, equal to the size of a silver dollar.

In almost every instance the vesicles commenced by a small point of elevation, which rapidly enlarged to the extent described. Many, and, in fact, the greater majority, remained of small size, those under the size of a pea passing through their several periods of metamorphosis without rupture of their covering. With the coagulation of the albuminoid constituents of their liquid contents there was a slight exudation of fluid over the surface of the envelope, which upon desiccation formed a brown, and sometimes brownish-black, crust at the same time that the thickening fluid of the vesicle hardened to form the whole into a scab. Upon breaking up these scabs under a strong magnifying glass, the epiderm could not be distinguished, it having apparently been absorbed into the general decomposition.

The larger vesicles, by reason of their position upon exposed parts of the body, or by contact with the wearing apparel, were ruptured at an early stage, permitting the escape of their contents. Then followed for a longer or shorter period the exudation of a small quantity of serous fluid, which, finally drying, formed scales or crusts according to the amount of fluid exuded. Where the base was completely denuded of its epiderm, it presented an excoriated, bright red surface resembling in every way the appearance of a denuded blister. When the exudation became attached to the clothing it caused the patient to feel the greatest pain that he complained of at any time.

The exuded liquid resembled in every respect that of an ordinary blister, being limpid, of a faint straw color or yellow, sometimes having a slight tinge of rose, slightly viscid, inodorous.

By puncturing some of the larger phlyctenulæ I obtained in a silver spoon a sufficient quantity of the fluid contents for analysis. Heated over a Bunsen flame, it promptly coagulated, becoming opaque, of a milky, opaline color, condensing into a mass resembling the white of an egg in consistency. Exposed to the flame for sev-

eral minutes it became dry, firm, and hard, and acquired a russet color, which browned as the heat was continued. A small quantity exposed for a day in a watch-glass to the sun's rays, evaporated, leaving a thin glossy scale of yellowish-brown color resembling the crusts that succeeded to the ruptured vesicles. The addition of a few drops of pure nitric acid to a quantity in a glass spoon, gave rise to the formation of white flakes throughout the whole, and upon being exposed to heat they precipitated, showing the fluid to be of an albuminous nature.

Mixing with an alkaline solution produced no change. Under the microscope the liquid presented leucocytes, a few red disks, and granular matter of a fibrinogenic nature.

The crusts formed by the coagulation and drying of the serosity were ordinarily of a squamous character, with a roughened, corrugated surface; first of a yellowish-brown, they darkened to a chocolate color in measure with their age.

The fluid of the very small phlyctenulæ in some instances was reabsorbed, leaving behind the vesicular covering, which changed color in a similar manner to the crusts, and, forming a scale, dropped off, exposing a newly formed epiderm of quite a natural aspect.

The tumefaction was the first modification that manifested itself in the cutaneous organ, quickly followed by heat at the affected seat, sometimes accompanied by pain; but more often this symptom appeared only after the rubefaction had extended over the surface of the tumor, sharply defining its limits and accompanying the elevation of the vesicle. This order of development was almost constant, the only irregularities being confined to the manifestations of heat and pain, but the period of duration of their successive development varied a great deal; in some the vesicle appeared simultaneously with the reddening of the tumor; in others, several hours, or even a whole day, after the rubefaction, and again in others, the tumefaction, heat, rubefaction, pain, and vesication so rapidly followed each other as to be practically indivisible. Neither did the development of these primary lesions follow a progressive accrescence, for it was after the tumefaction and rubefaction had arrived at their greatest degree of intensity that the vesicles commenced to enlarge, and this vesicular enlargement proceeded unaccompanied by any increase of the other symptoms and never extended beyond the borders of the tumefied base.

There was one point I particularly remarked in the respective march of the symptoms, viz., that in measure with the accrescence of the vesicle the tumefaction diminished, whereas the heat and pain followed no fixed law in their appearance or progress. Sometimes they accompanied the tumefaction, sometimes they appeared only with the vesication, and again appeared only after the rupture of the phlyctenulæ.

In measure with the desiccation the tumefaction became resolved, the heat disappeared, and the pain subsided or changed to pruritis; there remained only the rubefaction, which was always the last to pass away.

The duration of these respective stages varied widely, but the average for each may be stated at one to three days for the first, twenty-four to thirty-six hours for the second, one to three days for the third, and the same for the fourth, resulting in a mean proportion of seven days for a vesicle of medium size that became ruptured. Those that were reabsorbed extended over a longer period of duration.

No part of the skin was exempt from the eruption. It appeared upon the plantar surface of the feet; was quite thickly scattered over the scalp; two vesicles appeared upon the glans penis; one at the meatus, upon the scrotum; one upon the lower left eyelid, impinging upon the conjunctiva palpebrarum, and several upon the mucous membrane of the mouth. They appeared most thickly over the abdomen and back.

In treating the case I ordered a teaspoonful four times per day of the following:

℞. Liq. ammon. acet. . . . 60 grammes.
Liq. potass. arsenit. . . . 3 grammes.
Aqua destil. . . . ad 100 grammes.
M.

Ordered him to abstain from bathing, except the hands and face, and to anoint the whole surface of the body, morning and evening, with the following:

℞. Oil olive. . . . 100 grammes.
Oil terebenthin . . . . 60 grammes.
M.

This seemed to cause the death of the white blood-corpuscles, as the fluid of the bullæ almost immediately became opalescent, like diluted pus.

On the 14th the erythema had disappeared almost wholly, except where it covered the œdematous swellings. He complained of a chilly feeling upon moving about the room, and upon rising in the morning he felt slightly nauseated.

On the 15th he passed a restless night, was still nauseated and constipated, tongue coated, breath bad, but no fever. Ordered two teaspoonfuls after each meal of:

℞. Quiniæ sulph. . . . 2 grammes.
Ac. sulph. arom. . . . q. s.
Syr. aurant. cort. . . . 30 grammes.
Aquæ destil. . . . ad 90 grammes.
M.

For his restlessness and loss of sleep I ordered a tablespoonful at bedtime of

℞. Ammon. brom. . . . 8 grammes.
Tinct. badian. . . . 16 grammes.
Aquæ destil. . . . ad 100 grammes.
M.

On the 16th, after two doses of the sedative, he passed a quiet night and slept well. No nausea, good appetite, bowels free, and the patient feeling very comfortable.

On the 17th he was obliged to take a sedative again, to sleep; he looked bright, appetite continued good, and there was less soreness of the surface. He was ordered a full diet, with a pint of old red wine for his lunch and the same for dinner.

On the 18th he slept well without any sedative, looked bright, felt hardly any soreness, but had no inclination for exercise; appetite remained good. Many of the vesicles were ruptured, and the exudation adhered to the clothing; consequently I ordered him to stop the inunctions of oil and apply the following, morning and evening:

℞. Soda boras,
Tinct. benzoin. . . . āā 4 grammes.
Glycerine,
Aqua rosa. . . . āā 50 grammes.
M.

Followed by

℞. Pulv. amylum. . . . 60 grammes.
Zinci oxide. . . . 25 grammes.
Salol . . . . 1 gramme.
Pulv. camphor. . . . 2 grammes.
M.

On the 19th these applications promptly dried up the exudation, and the vesicles in process of formation looked aborted.

Examination of urine resulted as follows: Clear, yellow color, without deposit or unusual odor; reaction, acid; specific gravity, 1.011.

Microscopical examination disclosed the débris of epithelial cells and a few leucocytes.

By the application of heat and nitric acid a trace of albumin was discovered, and by Fehling's test a trace of sugar, but too feeble to determine the quantity of either.

Urea	9.90	grammes per litre.
Phosphoric acid	0.62	" "
Chlorides	5.70	" "
Uric acid	0.17	" "
Total solids	21.20	" "

showing a marked alteration in the digestive and secretive processes.

July 20th.—He had a severe headache during the

afternoon and evening of the 19th, but no nausea or other untoward symptoms. He drove out for a half hour or more during the afternoon.

This morning he felt quite well and was fully dressed, ate heartily with relish, and had no digestive trouble. He had a slight cough throughout the attack, and complained of points of pain along the œsophagus during the act of deglutition, which would indicate the probable existence of blebs upon its mucous membrane; they made themselves evident upon the mucous membrane of the mouth, and probably existed upon that of the trachea simultaneously with the cutaneous eruption, following the same course of capillary engorgement and vesicular phlogosis.

In many of the numerous articles I have consulted upon pemphigus I have observed a correlation between the pathologic state of the skin and the secretory organs.

The tumefaction indicates a derangement in the circulation of the fluids which fill the capillary network, and the character of this tumefaction indicates that the derangement consists in as many distinct fluxions as there are phlyctenulæ.

The heat and pain announce an augmentation of the organic action in the cutaneous capillaries, a greater activity in the elaboration, as well as the conversion into a less liquid state of the humors contained in the system, accompanied by an exalted sensibility of the parts which are the seat of the fluxion.

The rubefaction announces the passage of blood into the vessels which ordinarily contain only white fluids, and which, in the early period of invasion, threw out from the larger swellings rosy rays which were probably due to irritation of the larger lymphatic vessels.

Finally, the vesication indicates a vicious increase in the action of the deep exhalant vessels, carried to the point of a serous effusion which detaches the epiderm from the reticular body.

It is evidently in the capillary system that the first rôle of the cutaneous affection is played; extending to the mucous surfaces, and compromising the nutritive processes, all of which may possibly be traced to some derangement of the vaso-motor control over the capillary circulation, and over the functions of nutrition, and as the several progressive symptoms point to a general derangement of the circulation in the capillaries, it leads one to suspect a primary lesion of the central nervous system. The fact that neither climate, geographical distribution, season of the year, nor any special diet or habits of life seem to affect the development of the disease, and that it occurs in persons of all temperaments, in the healthy as well as the delicate, would lend probability to this supposition.

There appears to be a vicious increase in the functional activity of the capillary vessels and their exhalants throughout the whole system. This local cause of the affected parts depends upon some lesion of the vital forces which animate these parts; lesions which cause an abnormal exaltation of the insensible organic contractility and of the organic sensibility which presides over the functions of the capillaries and their exhalants.

The chemical examination of the serosity obtained from the blebs showed it to be of a markedly albuminous character, and besides the local lesions there is, apparently, a change in the intimate composition of the fluids which circulate in the capillary system. The accumulation of these albuminous fluids in the capillary network, and the vicious increase of the vital forces which preside over the functions of those vessels and their exhalants, is probably the exciting cause of the cutaneous affection.

Gall-Stones. Czerny says, are to be removed and the bladder sutured without abdominal drainage. The danger to life will be less than similar operation on the urinary bladder. The preferable incision is a short vertical cut in the linea alba, and a horizontal one to the right, just below the umbilicus.

Progress of Medical Science.

Can Cocaine be Dispensed with?—Dr. K. L. Schleich reasserts that absolute local immunity from pain, even during protracted operations, can be obtained without resorting to general narcosis of the patient, so that a sufferer may remain perfectly conscious during the amputation of his hand or foot, or exposing himself to the danger of syncope ever present in the operating room. Subcutaneous injections of a solution of sugar or salt, or even of simple cold distilled water, will produce exactly the same local anæsthetic effects as cocaine. This discovery has already borne the test of numerous experiments, and will be tried in Vienna on a larger scale. The explanation of the phenomenon is simple: Local insensibility to pain is caused in the case of cocaine by purely chemical changes; while cold water acts mechanically by means of high pressure and low temperature. Under the influence of the high pressure and sudden lowering of temperature the blood and lymph are driven from the region operated upon to places where the pressure is less. The tissue is thus deprived of its supply of blood, and temporary paralysis of the nerves results. It is affirmed that the importance of this discovery is all the more undoubted seeing that if, in a given case, cold water alone should fail to produce the needful degree of insensibility, a weak and absolutely harmless solution of cocaine would prove certainly efficacious.

Observations on the Passage of Microbes through the Placenta.—At a recent meeting of the Biological Society Dr. Anché, of Bordeaux, made known the result of certain researches he undertook into this subject. Two women, one of whom was pregnant three months and a half, the other two months, were attacked with small pox and as a result aborted. In the blood and liver of the fœtus of the former was found the streptococcus pyogenes; in the latter the staphylococcus pyogenes aureus. Both these patients succumbed. In the blood and viscera of the first was found the same micro organism as in the fœtus, while the staphylococcus was observed in the blood of the second. These observations are of interest not simply as illustrating the passage of micro-organisms through the placenta—a fact which had been previously ascertained in other affections—but because this was the first time that such a thing was noticed in small-pox. They were also suggestive as probably explaining certain hitherto obscure cases of abortion and death of the mother, without apparent secondary infection through the uterine passages.

Toxicity of the Urine of Patients with Suppurative Affections.—Drs. Nanotti and Baciocchi have sought to ascertain whether in all suppurative processes, from the most trivial to the most severe, the pyogenic organisms are eliminated by the kidneys. As the result of their labors they affirm: 1. That in every suppurative process, no matter how limited, even if there be absence of any general reaction, the microbes are eliminated by the kidneys without producing any appreciable renal lesion. 2. That pyogenic organisms eliminated in this way are still possessed of considerable virulence. 3. That the urine of such patients has a toxicity distinctly greater than that of normal urine. 4. That such urine is capable of producing wound infection. The practical deductions to be drawn from these results are as follows: First, in suppurative affections to encourage elimination by the kidney, choosing, however, those diuretics which do not greatly affect the renal circulation. Second, the infective nature of the urine is a sufficient indication of the desirability of disposing of this efficiently. — *The British Medical Journal.*

Carpenter's Screws are suggested by Allis to unite the bevelled ends of bone together. The hole for the screw in the proximal fragment should be so large that the thread will not get a hold upon it.

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A BELIEVER IN DRUGS.

DR. J. S. WHITMIRE, an esteemed physician living in Metamora, Ill., and now in his seventy-first year, gives an interesting account of the subjective and pharmaceutical side of cerebral rheumatism. He incidentally shows his belief in drugs, and proves by his tale that medicines do not kill, but perhaps cure. Dr. Whitmire had been a sufferer from rheumatism for several years. His head trouble began about February 18th, and he was not convalescent until May, so that for over two months he underwent the sufferings of a painful disease and the assiduous medicinal experimentation of his brother physicians. The doctor was taking iodine when his rheumatism attacked the cerebral dura mater. Becoming convinced that the case was serious he began to take black cohosh, iron, quinine, strychnia, and iodide of potash every four hours; at the same time he kept the bowels open, the heart steady, and the blood alkaline with a mixture of phosphate of soda and tincture of digitalis every six hours. We estimate that he took six drachms of cohosh, a tenth of a grain of strychnia, six grains of quinine, six of iron, one ounce of phosphate of soda, and twelve drops of digitalis every day for a month. Then he went to bed, being if anything worse.

After further consultation, the patient was given ergot, cohosh, gelsemium, and hyoscyamus every four hours, and strychnia, digitalis, cactus, and citrate of potash every six hours. In order to exhibit the logical workings of the medical mind in the presence of such a combination, we would state that these prescriptions were "intended, through the effects of ergot, digitalis, and strychnia, to lessen the calibre of the cerebral vessels and increase the tonicity of the heart; the gelsemium and hyoscyamus to lessen the intense pain of the head; the cit. potass. and phos. sodium to increase the renal secretion, produce alkalinity of the blood, and keep the bowels in a soluble condition." Hot salt was also applied to the head.

The venerable patient stuck to this medication for ten days without getting any relief whatever. The pulse was now 120, the temperature normal, the patient suffering great pain; the family was summoned in expectation of a serious issue to the trouble.

He was now put upon fluid extract of manaca, every four hours, with citrate of potash, gr. xv., strychnia, quinine, iron, and cactus every six hours. This was taken for fifteen days. Being still no better, ergot was added, and the citrate of lithium given in larger quantities. The kidneys now began to act, and the patient's sufferings gradually lessened so that in two weeks more he was convalescent. The disease left its trace, however, in an optic atrophy and some dulness of hearing. At last accounts the doctor was taking iron, strychnia, quinine, and hydrodic acid. He adds this cheerful note, which should interest students of the psychology of dying:

"Notwithstanding all my sufferings, and the indelible tracks left in the organs and tissues on account of disease, there still remains some pleasant memories connected with the terrible ordeal through which I passed. These are the delightfully pleasant and beautiful illusions that appeared to my mental vision when my disease seemed inevitably lethal, which was for a few days between the 1st and 15th of April; and I would not, even at this time, lose their pleasurable expression for any reasonable consideration; and I really felt that I was lost and abandoned when they ceased to appear. They came unbidden in my waking hours, at any time when I would close my eyes, and I did not mention them to my family or physicians, lest they would think I had lost my reason and cease paying attention to my real complaints; but for all that, I really reveled with ecstatic delight in their ephemeral beauty."

What particularly interests the objective mind, however, is the doctor's patient injestion of pailfuls of utterly useless drugs.

If he had taken his potash copiously at first, with plenty of salicylate of soda, he would have been well in two weeks. But news of the salicylates does not seem to have reached the learned pharmakophiles of the pleasant town of Metamora.

TUBERCULOSIS OF THE FEMALE GENERATIVE ORGANS.

THE terror of tuberculosis increases with each fresh accession of knowledge regarding the extraordinary and wide-spread activity of the tubercle bacillus in its warfare against man. When Koch first demonstrated that consumption was tuberculosis, there was but a very inadequate idea of what still more important discoveries were to follow. It was not long, however, before it was shown that scrofulous glands were tubercular, then that hip-joint disease, Pott's disease, and a vast number of chronic lesions of bones and joints were due to the same malignant microbe. Chronic fistulas of the anus, many chronic abscesses, chronic inflammations of the middle ear, pleurisies, pneumonias, peritonitis, cystitis, and lupus were traced to the same source.

The bacillus attacks the human system at all its orifices, and while the respiratory tract seems to be the least resistant, yet it would perhaps be found that the percentage of infection here is by no means so greatly superior to that of other organs or mucous channels. In 1,000 autopsies, cited by Osler, there were 275 cases with tuberculous lesions, or over one fourth. In the surgical clinic at Wurzburg, among 8,873 patients, 1,287, or about one-seventh, were tuberculous, the bones and joints being involved in 1,037 cases. The post-mortem statistics of Harris and others show that over one-third—perhaps over one-half—of the people who live to middle age have some form of tuberculous infection.

A good deal of attention has been paid to tuberculosis of the male genito-urinary tract. Gynecologists have, however, been backward in this line of investigation until recently. The "Johns Hopkins Hospital Reports," vol. iii., contain a series of articles by Dr. J. W. Williams, which are of much importance. Dr. Williams found tuberculosis seven times in ninety-one cases in which the tubes and ovaries were removed for inflammatory troubles. In only two of the seven cases was the disease recognized before operation. Dr. Williams estimates that tuberculosis of the female generative organs is about four times more frequent than has generally been supposed. The order of frequency of infection is approximately, tubes, uterus, ovaries, vagina, cervix, and vulva.

The source of the local infection is; 1, from areas of tuberculosis already existing in the patient; 2, from the outer world by direct infection; and 3, by bacilli from the excretions of tuberculous patients invading the genital tract, as in cases of tuberculosis of the urinary organs or intestines. The majority of cases of female genital tuberculosis are secondary to tuberculosis elsewhere in the body, and are due either to infection from the blood or from neighboring organs. Direct infection from the outer world may be the result of the introduction of infected instruments or fingers, or as the result of coitus with men having genital tuberculosis. The possibility of infection by the latter method is considered extremely probable, though not scientifically established.

Dr. Williams's article will undoubtedly be of service in directing closer attention to the subject of the pathology of the diseases of the pelvic organs. It will introduce a new element into the question of operation.

UNITED CHARITIES.

The opening of the United Charities Building in this city, on Monday last, was a notable event in the social history of this city, and has a special interest to medical men whose lives are so largely occupied with charitable work. The building, which is the gift of Mr. G. Stewart Kennedy to a Board of Trustees, representing the Children's Aid Society, the New York City Mission and Tract Society, the Association for Improving the Condition of the Poor, and the Charity Organization Society, has been formally opened. It stands on the northeast corner of Fourth Avenue and Twenty-second Street, and it has been erected at a total cost of $700,000, including the site.

The opening exercises included a most eloquent and masterly oration by Ex-Mayor Hewitt, who showed in vivid language the importance, to this country in particular, of the need of dealing energetically and efficiently with the great problems of the destitute and defective classes. He showed that while the United States was increasing in wealth in greater proportion than in population, it was also increasing now faster in crime even than in wealth, a fact not true of any European nation. In 1850 the criminals constituted one in 3,500 of our population; in 1890 they were one in 786.5, showing that crime had increased nearly three times as rapidly as population during the last forty years. Says Mr. Hewitt: "To the student of history familiar with the causes of the downfall of the Roman Empire, and of the state of society which preceded the European cataclysm of the last century, this condition of affairs can suggest only the gravest forebodings."

What may particularly interest medical men is the fact that, while our wealth has increased five times more than the population, medical charity and pauperism, despite this, have increased also. It seems to be the one form of pauperism which social economists do not think it worth while to check, and which philanthropists delight to encourage.

We trust that one outcome of the union of charities will be a more careful study of the problem of the medical pauper.

DOCTORS AND HOTELS.

Every person of sensitive morals, and a good many with only every-day sensibilities, would be shocked if the whole story of the relations of doctors to hotels were written. There is a fashionable hostelry in this town where the hotel doctor charges seven dollars a visit, and we much mistake if the hustling landlord does not get two of it. We have heard it stated on good authority that in many hotels the official doctor is obliged to give up from one-fifth to one-third of his charges to the business management. People who are taken ill in hotels feel particularly alarmed. They must have a doctor and are not disposed to question about terms. They do not find out what these are until they come to settle the bill, and then expostulation is too late.

We cannot understand how honest men can connive at these hotel methods. To charge an extra fee in order to satisfy the extortion of the landlord is, in plain words, robbery. We have no specific code of ethics, but there is a standard of right and wrong of which most people see the justice and need. Doctors who do not follow it should be exposed, and the opinion of their professional brethren made known. This is not only right, but will sooner or later be imperatively demanded, or the public will protest, and the honor and honesty of the profession will be impeached.

Doctors should not divide extortionate charges with hotel-keepers, and all who do should not be considered honorable men or regular members of the profession.

A PROFESSOR OF HORSES WANTED.

A contributor to *The Rider and Driver*, Mr. Edmund Abbott, of Providence, R. I., sends to that popular journal the following note:

"I wish the Medical Record would publish some articles on correct driving, holding lines, sitting, etc., and I refer them to your office. Physicians have lots of horse expense, if they live long enough, and they pay dearly for it. I have often wondered why teachers in the large medical colleges did not refer students to the riding-schools for recreation and instruction during their student days, and not allow the fellows to go out into country practice with no knowledge of horsemanship, to be victims of unprincipled dealers, and pay so much, and drive so poorly.

"We have a man here giving lessons to physicians in driving. They need instruction, and physicians are great victims to boarding-stables."

The suggestion of Mr. Abbott is a very timely one.

The majority of physicians spend more time in driving horses than in practising medicine. After the first ten years of struggle, the physician is apt to become quite as much interested in horses as in pathology, and perhaps at that date he knows more on the former subject. In the rural districts the doctor generally has the best horse, and drives faster as well as more than anyone else.

If he could get some points early in his career, instructing him how to get and keep a horse, so that it would last long, never get sick, and go all day, the information would be extraordinarily useful. Perhaps some of our readers have learned the secret, and can offer some hints on the way to treat horses.

NATIONAL LEGISLATION OF MEDICAL AND SANITARY INTEREST.

THE Congress whose session is just finished, accomplished little of medical or sanitary importance aside from passing the Harris quarantine bill.

It cut down the appropriation for the library of the Army Medical Museum, and came very near leaving out the appropriation for the Index Catalogue.

It passed a bill abolishing Army contract surgeons, pensioning Army hospital nurses, and raising the pay of hospital employees.

It also passed a bill compelling railroads to use automatic car couplers. By this latter act many lives will doubtless be saved annually.

News of the Week.

The Army Medical Board will be in service in New York during the month of April.

The Baltimore Medical College has just opened its new building.

Dr. Robert Sloan, of Middletown, N. Y., died recently, aged eighty-seven.

The Coroner System.—As stated in a recent issue of the MEDICAL RECORD, a bill is before the Legislature at Albany whose purpose is to abolish the present coroner system. There is good reason for reform here, but there has always been the practical difficulty that the system is embodied in our State Constitution. This, however, is not an insurmountable obstacle. The Committee on Legislation of the State Medical Society endorses the object of the present bill in a general way, and says: "Without endorsing any particular bill, in all its details, which may at the present time be before the Legislature, this committee feels warranted in urging the Legislature to pass a law which will, in the State of New York, as in the State of Massachusetts, make the office of coroner one to be filled only by a competent physician. The committee also believes that a sufficient salary—not less than $5,000 in great cities, and from $1,000 to $2,000 in the country and smaller towns—must be paid in order to secure competent medical service. The co-operation of the press of this State is earnestly requested in favor of this principle."

The Enlargement of Hoffman Island.—A bill has been prepared by the Quarantine Commissioners calling for an appropriation for the enlargement of Hoffman Island, by extensions 150 feet long on its easterly side and 500 feet on the northern end. On the latter it is proposed to build a hotel with accommodations for five hundred cabin passengers, which will be isolated from the present docks. Until this is ready it is proposed to retain the Surf Hotel at Fire Island. The bill also calls for an appropriation for the construction of buildings on the easterly extension of the island, to shelter 1,500 more steerage passengers than the present accommodations for 1,200. The commissioners ask, in addition, for a further appropriation for a three-story fire-proof hospital building on Swinburne Island in place of the two frame wards there.

New York State Legislature.—A bill has been introduced appropriating $25,000 for an idiot asylum for "unteachable idiots." Also a bill authorizing the New York City Board of Health to purchase South Brothers Island, and providing for its annexation to the Twenty-third Ward. This is the only island about New York City which is owned by private parties, and its purchase is designed to provide the city Board of Health with a place to use for isolation purposes, should occasion require.

Commencement of the Meharry College.—The seventeenth annual commencement of the Meharry Medical Department, of Central Tennessee College, Nashville, Tenn., was held at the Gospel Tabernacle, February 7th, in the presence of an audience of more than three thousand people. There were thirty-six graduates in medicine, two in dentistry, and six in pharmacy. During the past session one hundred and twenty students in medicine, seven in dentistry, and twenty-one in pharmacy were enrolled. About one-half of the educated colored physicians of the Southern States are graduates of this institution.

The Texas Medical College, at Galveston, did not thrive while charging fees for tuition. The Board of Regents has therefore abolished these fees altogether, and one may now take the three years' course by paying a matriculation fee of $30. Our Texas brethren can hardly congratulate themselves on the change, for while it may increase the number of Galveston medical students, there will be an additional inducement for all impecunious youths to rush into an already overcrowded profession.

A Generous Gift to Laval University.—The Sulpicians have donated to Laval University a large piece of ground on St. Denis Street, valued at $30,000, and, besides, $74,000 in cash, the whole to be at the disposal of the medical faculty of the University. Montreal is to have another big medical school. Work is to be commenced immediately, so as to get the buildings in running order as soon as possible.

The Corner-stone of a New Hospital at Mount Vernon, N. Y., was recently laid. The land and $9,000 was given by Miss Martha Wilson.

The State of Washington has now a law prohibiting the use of cigarettes within State limits. Cigarette smokers travelling that way will please take notice.

A Strange Epidemic in Asia.—Advices received from the province of Astrakhan, in Southwestern Russia, adjoining the Caspian Sea, are to the effect that a strange epidemic, of a character as yet unrecognized, is killing thousands of people in the trans-Caspian region. It was partly by this route that cholera entered Russia last year.

The news has created great consternation on the European shores of the Caspian Sea, and there the question is being considered as to whether later and fuller information may not show the disease to be a form of cholera more deadly and rapid than usual in its effects.

Cholera in Hamburg.—The commission to prevent the spread of cholera has given notice that cholera cases are still present in the city.

Typhus Fever in New York.—Two or three new cases continue to be reported daily in this city.

Cholera and Immigration.—Secretary Carlisle to-day (March 13th) issued the new regulations regarding the precautions to be observed in admitting immigrants to the United States. They contain seventeen articles, the first ten of which are substantially the same as the regulations now in force. Articles 11 to 15, inclusive, are made to conform to the new laws affecting immigration, passed by the last Congress.

Article 11 says that no vessel bringing immigrants from ports where contagious or infectious diseases are prevailing shall be admitted to entry, unless it appear by the certificate of the consular officer at such port that said immigrants have been detained at the port of embarkation at least five days, under medical observation, in specially designated barracks or houses set apart for their exclusive use, and that their clothing, baggage, and personal effects have been disinfected before being placed on board. These restrictions will also be applied to vessels bringing immigrants from non-infected ports, but who come from infected localities.

Article 12 requires that there shall be delivered to the Commissioner of Immigration at the port of arrival lists of such immigrants, which shall state as to each of said passengers substantially what is now required by existing law, and these additional requirements: Whether the immigrant has paid his own passage or whether it has been paid by other persons, or by any corporation, society, municipality, or government; whether ever in prison or almshouse or supported by charity; whether a polygamist; whether under contract, express or implied, to perform labor in the United States.

Article 13 provides that such lists shall be accompanied by the foregoing interrogatories and answers thereto in the language of the immigrant, which shall be signed by him in the presence of the agent granting him transportation; and there shall be indorsed thereon, in the language of the immigrant, a notice that, if upon his arrival in the United States it is found that such interrogatories have not been correctly answered, he will be immediately returned: also that he will be required to take oath of the truth of such answer if it be called for by the Commissioner of Immigration at the port of arrival in the United States, and that a false oath will subject him to a fine or imprisonment.

Article 14 provides that the immigrants shall be listed in convenient groups, and no one list or manifest shall contain more than thirty names.

Article 15 provides that in case of the failure of the commanding officer of the vessel to deliver to the Inspector of Immigration lists or manifests, verified as aforesaid, containing the information above required as to all immigrants on board, there shall be paid to the Collector of Customs at the port of arrival the sum of $10 for each immigrant qualified to enter the United States concerning whom the above information is not contained in any list, as aforesaid, or said immigrant shall not be permitted so to enter the United States, but shall be returned like other excluded persons.

These new regulations will go into effect on May 3, 1893.

A Cholera Conference was opened last Monday at Dresden. Its objects are to determine what restrictions can be imposed without interfering with commerce.

Our Medical Guard Abroad.—Dr. R. M. Woodward, Passed Assistant-Surgeon United States Hospital Service, who has been in command of the hospital, Cairo, Ill., for the last three years, has been ordered to Rotterdam, Holland, where he goes on duty under the new immigration law, and with a view to prevent the importation of cholera from that port. He has been relieved from duty by Dr. Blue, and as he is directed to be at Rotterdam by April 1st, his colleagues are assigned as follows: Dr. Purviance, to Liverpool; Dr. Pettus, Southampton; Dr. Rosenau, Antwerp; Dr. Irwin, Marseilles; Dr. Houghton, Havre; Dr. Godfrey, Naples; Dr. Magruder, Genoa; and Dr. White, Hamburg. All of them will remain abroad as quarantine officers for four years.

The Croton Watershed Bill.—A special committee of the Academy of Medicine has applied, through its Secretary, Dr. J. West Roosevelt, to Senator W. L. Brown, Chairman of the Senate Cities Committee, for a hearing before his committee on the bill providing for the purchase by New York City of certain lands in the Croton watershed. The Academy does not approve the bill.

The Health of the City.—The death-rate of New York City has been steadily increasing in the last few weeks and now reaches 26.26 per 1,000. There are some cases of grip about. Typhus fever still exists, there being 28 cases on North Brothers Island. The total record of deaths during the present outbreak has been 119.

The Record in Triplets has been beaten by a woman living in Cold Spring, N. Y. She is thirty-one years of age, has been married nine years, and has given birth already to seventeen children. She has had triplets three times, twins three times, and single births twice.

Venus de Medicis not a Healthy Type.—Some years ago, at the house of Sir Richard Owen, the great naturalist, Mr. Hunt met the artist professor of sanitary science, the late Sir Edwin Chadwick, who began a conversation thus: "As a Commissioner of Health, I must profess myself altogether opposed to the artistic theory of beauty. There is the Venus de Medicis, which you artists regard as giving the perfect type of female form. I should require that a typical statue with such pretensions should bear evidence of perfect power of life, with steady prospect of health, and signs of mental vigor; but she has neither. Her chest is narrow, indicating unrobust lungs; her limbs are without evidence of due training of muscles, her shoulders are not well braced up, and her cranium and her face, too, are deficient in all traits of intellect. She would be a miserable mistress of a house and a contemptible mother."

A Hint from an Anti-Vivisectionist.—The following editorial note, taken from *Our Animal Friends*, ought to be printed in large type in every anti-vivisection journal

and taken to heart by every anti-vivisectionist; for no class of men have more systematically and cruelly blackguarded reputable medical men than have those same anti-vivisectionists. *Our Animal Friends* says: "It would assist some persons to restrain their natural tendencies to vulgarity, if they would remember that abuse of an opponent strengthens the opponent's cause; and justly so, since it must needs be a bad cause which drives a disputant to the use of bad language. The editor of a journal, which we need not name, has recently illustrated the argument of abuse."

Preliminary Programme of the Eighth Annual Meeting of the Association of American Physicians, to be held in the Army Medical Museum and Library Building, Washington, D. C., on May 30, 31, and June 1, 1893. "The President's Address," by A. L. Loomis; "Discussion on Myxœdema," Referee, F. B. Kinnicutt; Co-Referees, J. J. Putnam and M. Allen Starr; "Sporadic Cretinism in the United States," and "Supplementary Report on Amœbic Dysentery," by William Osler; "Some Problems in the Etiology and Pathology of Texas Cattle Fever, and their Bearing on the Comparative Study of Protozoan Diseases," by Theobald Smith; "Experiments with the Bacillus Diphtheriæ," by A. C. Abbott; "The Parasitic Nature of Cancer," by Heneage Gibbes: "A New Pathogenic Bacillus," by H. C. Ernst; "Gonorrhœal Myocarditis," by W. T. Councilman; "The Prophylaxis of Cholera with Especial Reference to Immunization," by E. O. Shakespeare; "Creosote in the Treatment of Tuberculosis," by J. T. Whittaker; "On a Simple Continued Fever," by G. Baumgarten; "The Treatment of Typhoid Fever," by S. A. Fisk; "The Intestinal Treatment of Chlorosis," by F. Forchheimer; "Probable Origin and Early Symptoms of Certain Chronic Diseases of the Kidneys," by C. S. Bond; "The Reactions of the Urine with Ether," by A. H. Smith; "A Study of Addison's Disease and of the Adrenals," by W. G. Thompson; "Two Cases of Cystic Calculus and Two Cases of Diaphragmatic Hernia," by James Tyson; "Subphrenic Abscess with Especial Reference to Cases which Simulate Pneumo-Thorax," by A. L. Mason; "Sarcoma of the Lung, with Specimen," by D. W. Prentiss; "Pulsating Pleural Effusions," by James C. Wilson; "The Importance of Uterine Displacements in the Production of Vomiting during the Early Stages of Pregnancy," by G. M. Garland (to be discussed by Drs. W. T. Lusk and W. M. Polk); "Experimental Observations Concerning the Nature of Chorea," by H. C. Wood; Title to be announced later, by W. M. Polk.

Department of Medicine at the World's Fair.—The plans for medical service promulgated by the Medical Director of the Exposition, contemplate the maintenance of a hospital in which the more advanced modern theories will be demonstrated. A striking feature of this will be an effective ambulance service, each ambulance being accompanied by a trained nurse when called for the removal of a patient to the hospital. The Board of Lady Managers has begun the foundation of an elaborate scheme, the establishment and maintenance of a series of movable hospitals or relief stations, at various points on the World's Fair grounds, by means of which the safety and comfort of the public would be greatly served. Patients requiring immediate attention can be taken into one of these relief stations and there receive such prompt, expert care as will often render unnecessary their removal to the hospital.

A Statue of the Late Professor Gross.—The Alumni Association of the Jefferson Medical College has appointed a committee to raise funds for the erection of a bronze statue, of life size, of the late Professor Samuel D. Gross, M.D. About $9,000 has been paid into the treasury, and $3,000 are still needed to complete the fund. Checks may be drawn to the order of J. B. Chapin, M.D.

Some Successes of Medical Women.—Miss Inglis, a student of the Edinburgh Medical College for Women, who obtained the Triple Qualification given by the Royal Colleges of Physicians and Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, at the examinations in July last, has been elected to the post of House Surgeon in the New Hospital for Women in London. There were a large number of applications, including several from the English and Irish Schools. Miss Inglis has also gained the first of the special Pattison Prizes given by the Royal Colleges after examination for anatomical dissections, while the second prize was gained by Miss Giffen, also a student from this College. Miss Giffen was also awarded the Bathgate Gold Medal in Materia Medica. Both the Pattison and Bathgate Medals are open to male and female students, and the papers are signed by mottoes only, so that until the award is given the Examiner is ignorant as to the successful candidate's name. This certainly makes a good showing for the women attending the Edinburgh College.

Wonderfully Busy.—A Washington dispatch to a New York daily refers to one busy physician at the Capitol who had four hundred new patients during the forty-eight hours succeeding the inauguration ceremonies. The poor popular physician is also said to have kept on his clothes during the entire time of continuous attendance upon the poor unfortunates, and neither ate, drank, nor slept during that time. Too much, Doctor!

The Semmelweis Memorial.—The Committee on the Semmelweis Memorial has issued a general appeal for subscriptions to assist in the erection of a suitable monument to the father of antiseptic midwifery. An international committee has been formed to further this object. Those desiring to contribute may send their subscriptions to the Treasurer of the Hungarian Executive Committee, Dr. Elischer, IV., Petöfi-tér, Budapest, Hungary. The results of the collection will be periodically published, and the Executive Committee hopes to be able to submit a full report on the occasion of the International Congress for Hygiene and Demography, to be held in Budapest in 1894.

Ethical Progress at Hot Springs.—So many new physicians of the regular type have in the last few years located at Hot Springs, that it is only a question of a very short time when the irregular "drumming doctor" will have to seek greener fields. Two years ago, out of the ninety doctors practising here, about fifteen were considered reliable and "regular." One year ago, out of the eighty or ninety physicians, about twenty-five dropped into regular practice. At present, out of about ninety doctors, thirty to thirty-five or more are pursuing regular

methods. Some of these doctors have "drummed" formerly, but have quit, while the others are old practitioners here who have always been regular, and the remaining ones are new physicians. So at present, the outlook for the regular profession is encouraging. Some of the old drumming "bucks" have left the city, while many of the remaining ones are doing very little work, and we look for them to desert us the coming spring or summer.—*Hot Springs Medical Journal.*

A New Medical Marquis.—Dr. Matias Nieto Serrano, founder, proprietor, and editor of the leading Spanish medical paper, *El Siglo Medico*, has had the title of Marquis of Guadalerzas conferred on him "in recognition of the numerous and eminent services rendered by him to science, to his country, and to the State." The Marquis of Guadalerzas, who is now eighty years of age, has been a member of the Royal Spanish Academy of Medicine since 1839, and has been Perpetual Secretary of that learned body for thirty-nine years. He has also been a member of the Council of Public Instruction for nearly twenty years. He is the author of numerous works on "Medical Reform," "Medical Philosophy," "The Biology of Thought," etc., all marked by philosophic breadth of view and scientific precision of thought. He is at present engaged in writing a "History of Philosophic Systems," which is looked forward to with special interest, as likely to prove the most important work of its distinguished author.—*British Medical Journal.*

A Remarkable Operating Theatre.—A new operating theatre of a remarkable character was formally opened in the medical faculty of the University of Madrid recently. The new theatre has been entirely designed by the head of the surgical clinic, the Marquis del Busto, who has also furnished the funds for its erection. The operating department, called by its inventor "Quirofano"—which appears to be intended to mean a surgical transparency—consists of an outer room provided with an ingenious service of boiling water, and every provision for the sterilization of instruments and the preparation of aseptic dressings. In this room hang aseptic tunics for the use of the surgeons and their assistants. There are specially constructed beds for the conveyance of patients to and from the operating-table; some of these are fenestrated in such a fashion that the patient's limbs can be dressed without any change of position. Some of them are also fitted with apparatus which, if desired, will envelop the patient in an antiseptic atmosphere of any temperature. These beds, which are entirely made of metal, are also fitted with mechanical contrivances, which enable the patient's body to be fixed in whatever position is desired during the operation. In the operating theatre itself, antiseptic fluids of different kinds and of any required degree of strength, can be turned on, apparently much as beer is drawn from a machine. The operating-room proper is divided from the amphitheatre, where the spectators sit, by a glass partition, which is kept scrupulously clean. With the object of antisepticising the air of the operating-room, it is made to enter through two metallic cages fixed below the windows. Inside these cages a wide jet of gas can be burned, and through this flame the air has to pass before it enters the room. As the glass screen between the operating-room and the amphitheatre makes the surgeon's voice inaudible to the students, the sounds emanating from the operating-room are conveyed through a tube passing through the wall at the edge of the glass partition, and are collected in a kind of gigantic tympanum; this tube is closed except when the professor is addressing the students.

Obituary.

E. H. JANES, M.D.,

NEW YORK.

Dr. Edward Houghton Janes, Assistant Sanitary Superintendent of the Board of Health, died at his home, 57 West Ninety-fifth Street, March 12th, of heart disease. He had been connected with the Board for over a quarter of a century, and rendered valuable service in his official capacity. Although seventy-three years old, he was actively engaged in his duties almost up to the time of his death. He complained of feeling ill about ten days ago, and remained home for a few days. On Wednesday he resumed his duties. He appeared to be weak when leaving the office, and a clerk noticed him take a document from his desk and put it in his pocket. The document afterward proved to be his will. He was confined to his bed the next day, and on the following morning he died. Dr. Janes was descended from sturdy New England stock His ancestors came from Essex, England, in 1637, and settled in Northfield, Mass. Dr. Janes studied medicine at Hope, N. J., and was afterward graduated from the Berkshire Medical Institute. In 1857, he took up his home and began to practise in this city. In 1860 he married Miss Jane M. Yates. When the cholera threatened New York in 1866, and the Health Board was reorganized, he was appointed sanitary inspector. He was a member of the Sanitary Commission in 1867, and as a member of the Citizens' Association two years later, he assisted in planning the system by which the sanitary laws are now enforced in this city. In 1872, Dr. Janes succeeded Dr. Moreau Morris as city Sanitary Inspector, and he held the office until the year following, when the department was reorganized, and he became Assistant Sanitary Superintendent, which office he held up to the time of his death. For ten years Dr. Janes supervised the hospitals of the Health Department, and it was he who organized the Riverside Hospital, on Blackwell's Island, now on North Brothers Island. He occupied the chair of hygiene in the Woman's Medical College for seventeen years. He was Secretary of the Academy of Medicine for several successive terms, and was one of the organizers of the American Public Health Association. He was also a life member of the New York Historical Society, honorary member of the New Jersey Historical Society, a director in the Oratorio Society, and one of the Board of Managers of the Society for Improving the Condition of the Poor. He was an accomplished musician. He leaves a widow and two sons, Edward F., a paymaster in the Pacific Mail Steamship service, and Elisha H., a business man, and one daughter, Martha R. Janes. The funeral took place March 14, at 2 P.M.

Vaginismus causing reflex pelvic pain is relieved by completely removing the hymen and underlying subcutaneous tissues, extending the dissection down to the outside skin, including all the portion lying between it and the fourchette. A glass tube, short enough not to touch the uterus, and grooved deeply enough not to compress the urethra, is then inserted, and worn day and night at first, afterward only at night, and inserted once during the day.—Dr. Strong, in *Boston Medical and Surgical Journal*, November 24, 1892.

Red Pus found upon the dressing next a wound, having no clinical significance, and due to a bacillus, is described by Ferchmin.—*Vratch*, No. 25, 1892.

Society Reports.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, February 3, 1893.

GEORGE F. SHRADY, M.D., PRESIDENT PRO TEM.

Sudden Death with Symptoms of Internal Hemorrhage; Autopsy; no Cause Found.—DR. ANDREW H. SMITH related the case as follows: A girl came to the hospital with a moderate effusion into the left pleural cavity. The effusion diminished very much under treatment, her temperature became normal, she was convalescent, and as happy as one could desire her to be under the circumstances, when, at about ten o'clock in the morning, she complained of sudden and terrible pain in the upper portion of the abdomen. She became at once very pale, and he was sent for and found her presenting all the appearances of a woman dying from, for example, puerperal hemorrhage—subnormal temperature, bloodless lips, bloodless surface, extreme jactitation, great thirst, the pulse becoming more and more feeble and frequent—and she died soon after his arrival, or about 1.30 P.M. Before death, supposing there was internal hemorrhage somewhere, he went over all the cavities, but could find no evidence of blood accumulation. The physical signs were normal except for the little remains of pleural effusion. Excepting two or three small spots of bronchopneumonia, and about three hundred cubic centimetres of fluid in the pleural cavity, the autopsy was absolutely negative. The brain was examined very carefully, the intestines were opened their full length, careful search was made everywhere by Dr. Thatcher for effusion of blood, and none was found. Dr. Thatcher was quite at a loss to account for the death. Yet, the speaker thought, no one would hesitate, who had seen the patient, to say that she had died of internal hemorrhage. He added, further, that the heart and liver and all viscera were perfectly normal with the exceptions before named, and the existence of occlusion in two small branches of the renal artery by clots, which Dr. Thatcher thought were antemortem, but which, being so small, could have had no effect in causing death. The case, he said, was the most perfect enigma he had ever encountered.

Being asked whether the spinal cord was examined, DR. SMITH replied no, but there had been no paralysis of any form.

The Secretary read the following from DR. HENRY F. WALKER:

A Case of Hysteria.—In the case of Miss E——, I followed several distinguished physicians of this city, men of various schools of medicine. Her mother, on hearing my diagnosis, said, with some surprise: "That's what they all say."

It was a case of hysteria in a girl of sixteen, well nourished and developed, of pronounced hysterical type. She had the face half dull, half sullen, wholly watchful, which one finds in dark-skinned hysterical women whose attacks vary in degree from "pure cussedness" to real malignity.

The cause of the illness, so called, was disappointment at the decision of the family to remain in America instead of returning to Europe. The special trouble was retention of urine, with partial suppression. I saw her first on Sunday, December 26th. She had then passed no urine since Friday evening. I declined to use a catheter, and prescribed careful watching, and the drinking of one of the neutral waters, giving at the same time, in the patient's hearing, assurance that there was no occasion for alarm and that improvement would soon take place. At 11 A.M. she passed her urine, sixteen ounces, after an interval of thirty-nine hours.

From Sunday at eleven she passed no urine till Tuesday morning at seven, forty-four hours; then voided thirty-two ounces. Unfortunately, after this the urine was not measured. Her next urination was after fifty-five hours. Her next after forty-five hours. Her next after eighty and a half hours. Her next after sixty-two hours. Her next after thirty-nine and a half hours. Her next after forty-two and a half hours. From the last time mentioned the urine was voided regularly and in apparently normal amount. At no time was there any sign of physical or mental disturbance.

The case is unique in my experience. Of course, like all peculiar cases, it is open to a denial of the fact, but with a considerable familiarity with the wiles of the hysterical, I tried to guard against deception by strict espionage, and I believe the intervals reported to be correct. I believe the course pursued in treatment to have been the most judicious one, and that, had I expressed any degree of anxiety, or made use of the catheter to give relief, the result would have been far less favorable.

DR. ANDREW H. SMITH said that, unless previous experience with the case showed its safety, he would not be willing to allow the patient to go eighty hours without passing urine, for fear of over-distention of the bladder—hysteria or no hysteria. He thought he would have remarked in her hearing, that unless she passed urine within a certain time, it would be necessary to burn her back.

DR. BEVERLEY ROBINSON thought all such cases were extremely interesting, for although hysteria might, as Dr. Walker had said, be the sole cause of the trouble, yet it was quite conceivable for one to mistake. And even though the cause was hysteria, it was desirable to know whether absolute suppression of urine existed, and if none could be found with the catheter, the case should be observed for poisonous effects. Certainly, where absolute suppression was present it caused one considerable solicitude. He would widen the discussion a little and say that, personally, he was not quite confident as to the gravity of the manifestations of certain renal affections. In general, when there was a small quantity of urine and it was of low specific gravity, he always felt that there was imminent danger, say of convulsions. He did not care so much whether there was albumin or certain casts, provided there was a fair quantity of urine with a fair specific gravity. He asked for Dr. Delafield's opinion.

DR. DELAFIELD, referring to the case reported, said there seemed to be few limitations to what hysterical women could do. Replying to Dr. Robinson's query, he said he attached more importance to the specific gravity of urine than to the quantity passed. Urine of low specific gravity, say 1.002, and at the same time scanty, unquestionably indicated very great danger. The liability to overlook kidney trouble was shown in a case which had come under his notice the previous day, that of a policeman, who about three months ago passed the required physical examination and was promoted to be a sergeant, his standard of physical condition being placed above 90. Apparently he had been a large, strong, well-built man. He died with a colitis which had lasted months, and his kidneys must have been diseased for years, for they were very much atrophied and far advanced in chronic nephritis; in addition, there was a perforating ulcer of the stomach into the liver, causing a liver abscess. The man had been perfectly well, as far as he and his friends knew, until he got the acute disease which caused his death. Both chronic diseases had apparently caused no symptoms. The urine had been examined while he was sick—specific gravity, 1.010, no albumin.

The Variable Toxicity of Urine.—DR. ANDREW H. SMITH said that at the hospital they had been sending specimens of urine to Dr. Herter, who was making experiments regarding its toxicity. The results had been interesting, for without regard to the quantity of urea or crystallizable constituents, there had apparently been a great difference in the amount of toxic material which it contained. Notably in one case, that of a man having dilatation of the heart, œdema of the lungs, and a sinus, a drop of the urine injected into an animal caused death almost immediately, and the same result was obtained after removing the solid constituents, whereas ordinary urine produced no appreciable effect.

Dr. Tryon mentioned the case of a soldier whom he saw during the rebellion in a very severe convulsion, and examination of the urine at the bedside showed a large proportion of albumin. Calomel was forced between the teeth, and after it had acted the man was perfectly bright and showed no more symptoms of uræmia or kidney disease. He was still living.

Dr. Shrady said that twenty years ago he had made the diagnosis of Bright's disease of the kidney in a patient who was still living and in apparently good health.

Dr. Bryant knew of a commodore, chief of one of the bureaus of the Navy Department, who was pronounced to have Bright's disease about thirty-five years ago.

Dr. Delafield being asked how long a person could live with symptoms of Bright's disease, such as albumin and fibrinous casts in the urine, the fluid being of low specific gravity, replied that he might live as long as anybody.

Observations on Recurrent Appendicitis.—Dr. William T. Bull read the paper (see p. 321).

Dr. Robert Abbe being requested to open the discussion, was in doubt whether he had anything new to say. A case of appendicitis which he had recently seen, strikingly illustrated the inadvisability of relying on the temperature and pulse, for these, just prior to perforation or even at that time, seemed indicative of a very simple condition. The temperature might be practically normal, the pulse good, and yet within two or three hours, during the course of the catarrhal appendicitis, the man's life might come into the greatest danger. Dr. Bull's method of closing the pedicle, which he seemed to think was the best, was not so regarded by Dr. Abbe. It seemed to him that ligating the mucous membrane and then covering it over with the peritoneal coat of the pedicle was dangerous, for the locked-in mucous portion might give rise to trouble. That might explain the temperature in Dr. Bull's case. He thought the simplest way was to invert the serous membrane.

Dr. J. D. Bryant said that during the past year he had been observing five cases of recurring appendicitis, but he had operated in only one of them. He did not advise an operation in the others, except in one, and there it was declined. All the patients recovered. The case operated upon was that of a boy of about sixteen, who had had repeated attacks which finally had come to be almost continuous, and there was a large exudation in the region of the appendix. Evidence of pus could not be obtained on palpation before or after incision. The appendix was felt in the bottom of the incision into the firm mass, but was immovable, and he simply packed the wound with iodoform gauze. The temperature fell at once and the patient made a complete recovery. It seemed that the position taken by the appendix exerted some influence on the diseased process occurring in it. In five of Dr. Bull's cases it had been twisted and located behind the cæcum, and there seemed to be a markedly circumscribed process binding it down. That was an interesting fact in the clinical history.

The Influence of Gout on Appendicitis.—Dr. Beverley Robinson thought the question whether persons subject to appendicitis should be operated upon, was a very important and practical one, especially to general practitioners. Unquestionably a number of these people got well without an operation, although clearly suffering from recurrent attacks of appendicitis. For instance, recently he had seen a woman have such an attack, and she got well without an operation; he supposed if Dr. Bull should see her in a second attack, he would advise an operation. But she was a very gouty patient, and personally he believed she had a gouty appendix. In other words, he believed she had recurring attacks of appendicitis due to underlying gout. Whether this kind of inflammation went on to suppuration which afterward disappeared, he was not able to say. But he was pretty confident that a suppurative focus might sometimes occur and disappear without operative procedure. He would like the opinion of the surgeons on the question how far gout or other condition might cause the phenomena of appendicitis with apparent suppuration, which should recover without incision.

Dr. Bryant asked Dr. Robinson at what age patients most frequently showed gout.

Dr. Robinson understood the trend of the query, but said that there were a good many cases of gout in young people, although it seldom was recognized. It was not expected that at this age the disease would show itself so much in the form of deposits, etc. He meant rather retention of so-called excrementitious substances in the urine which produced gouty inflammatory conditions. It might occur at the appendix and disappear, as it frequently did, under medicinal treatment, even after suppuration had apparently taken place, but sometimes recovering only after an operation. Only a few days before he had had a case of swollen parotid gland which he believed contained pus, yet it disappeared entirely without incision after a purulent pleurisy had developed on each side in succession.

Dr. Tryon mentioned a case in which, about the time when the question of operating for appendicitis began first to attract considerable attention, a man on board vessel was taken suddenly with severe pain in the region of the appendix, but without tumor, without tympanites, fever, or symptoms pointing to peritonitis. Dr. Tryon remarked to the physicians present that an operation would seem indicated, but it would not be upheld at that period, consequently it was not undertaken, and the man died about the second day. Post-mortem showed perforation of the appendix and pus. He believed that had an operation been performed the man would be living today.

Surgeons Defended.—Dr. V. P. Gibney desired to speak a word for the surgeons in the treatment of appendicitis. He did not think with Dr. Robinson, he said, that surgeons cut or wished to cut in every case of appendicitis which they saw. He thought they saved a great many lives by timely action. The function of the surgeon was to determine just what cases should be operated upon, and when in doubt they should watch them very closely, and the moment an explosion occurred they should incise, and not wait and allow the patient to die.

The Development of Operative Procedures in Appendicitis and Salpingitis Compared.—Dr. W. M. Polk said he had always viewed the question of the treatment of appendicitis in about the same light as that of tubal disease. It had been very instructive to him to observe that about the same lines of thought and action had been followed in the two cases. When tubal disease was first brought forward prominently, the same operative rage seized upon the world, and all knew that a good deal of unnecessary surgery had been done in that line. But as time went on we were better able to differentiate between cases which should be let alone and those which should be operated upon. Appendicitis was giving nearly the same history. Referring to Dr. Robinson's query, he could corroborate the statement that there might be absorption of pus and muco-pus in salpingitis, where the inflammatory process was catarrhal in the beginning and not parenchymatous; but in appendicitis there was an element of danger which did not belong to salpingitis. Inflammation in the pelvis, as in tubal disease, showed a much greater tendency to encapsulation than inflammation higher up in the peritoneal cavity. Again, the inflammation was much more septic in appendicitis. Salpingitis seemed milder, although of septic origin, as when it occurred from abortion. While, therefore, in septic inflammation of the tubes he would be disposed to operate promptly as the only probable way of relieving the patient, he would also be disposed to operate very promptly in cases of appendicitis, fearing the action of virulent poison upon the delicate membrane. Then, there being less tendency to limitation of the inflammatory process in appendicitis, there was the greater reason for operating. Under certain conditions, then, he would prefer to operate at once rather than temporize in cases

of appendicitis, those reasons having, he presumed, been given by Dr. Bull in his paper, which he had not heard read because of having come in late.

Dr. Shrady thought Dr. Abbe's criticism of the treatment of the stump was justified. Personally, he had always been satisfied with simply turning in the mucous membrane and closing over the peritoneal surface with a Lembert suture. The question of when to operate and when not to operate was still an unsettled one, and depended much upon the individual experience of the surgeon and his skill in diagnosis.

Dr. Polk said that in tubal operations they did not apply any suture to close the opening at the end of the stump. It was very small, and if any portion had been left which had been a part of the suppurative cavity, they simply seared it with a little carbolic acid. Why not apply the same treatment to the vermiform appendix?

Dr. Bryant said the calibre of the vermiform appendix was larger and the walls firmer.

Dr. Shrady said the cautery was sometimes used, but Dr. Polk still thought carbolic acid would be sufficient, and that the application of a suture would be a waste of time.

Dr. Shrady thought the position of the appendix and the character of the adhesions would have much to do with the dangers of the operation, but they could not be determined beforehand. Adhesions to the abdominal wall, for instance, would cause a good deal of pain on motion.

The Influence of the Anæsthetic.—Dr. Andrew H. Smith inquired of the reader of the paper whether he had observed a difference in the mortality-rate in operations for appendicitis depending upon the anæsthetic employed. He had seen a number of cases operated upon under ether, and the patients had never rallied from the anæsthetic; whereas, when chloroform was used, although the case might ultimately prove fatal, yet the patient came out at least from the anæsthetic.

Dr. Bull said that in abdominal cases in general he had lately used chloroform quite as frequently as ether, especially where it was considered desirable to complete the operation as soon as possible, and his experience with it had been favorable. It had not seemed to increase depression; frequently the heart's action seemed to improve under its administration. He had received the impression, perhaps, without sufficient experience to justify it, that chloroform in such cases was more satisfactory than ether.

Dr. Cleveland asked Dr. Smith whether kidney trouble had been excluded in the cases referred to by him, and said that personally he never employed ether even if the only sign of kidney trouble was the presence of albumin in the urine.

Dr. Smith said that in several of the cases, at least, signs of kidney disease had been excluded.

Dr. Bull remarked, in closing the discussion, that he also thought closure of the peritoneal coat over the end of the exsected appendix, after pushing the mucous membrane back, was sufficient.

Tumor of the Medulla Oblongata.—Dr. Beverley Robinson presented a specimen of tumor of the cerebellum, with the following history furnished by his house physician, Dr. Rogers: The patient, W. S——, aged thirty-one, admitted November 30, 1892. Father and mother had died of Bright's disease. No scarlatina or whooping-cough; measles when young. No history of epilepsy; no rheumatic history. Intermittent fever for seven weeks, twelve years ago, while living West. No pulmonary, cardiac, gastric, hepatic, or renal symptoms. Always in good health. Says he had sore on penis when sixteen years old, treated himself, caustic used. (This sore came twelve days after intercourse.) No further symptoms followed this experience which would bear on syphilitic theory. Present trouble commenced four months ago. First noticed numbness in small finger of right hand; then, in succession, each finger similarly affected. This numbness stopped at wrist some time, and hand was not used with as great facility as formerly. Numbness gradually increased throughout arm, with accompanying impairment of facility of motion in whole limb. No pain at any time, except in right side. Feeling of numbness then reached lower limb of same side, commencing at thigh and extending down with same loss of freedom of motion. Loss of strength was noticed with above symptoms in both limbs. Two weeks ago commenced to have severe headache, worse on waking up, and lasting well into the day; sometimes all day. Frontal, and more on right side. Has vomited at times; not preceded by nausea, *i.e.*, projectile in character. For about a month has been troubled with vertigo, especially on rising, though frequently at other times while at work. Says objects at a distance appear double, those near, single. After reading for a short time everything becomes blurred. No convulsions at any time. On admission complains of loss of power in limbs and vertigo, chiefly. Bowels constipated and have been. Appetite good. Sleeps well. Pulse, 122; respiration, 24; temperature, 98° F.; urine, alkaline, 1.015, negative; diet, regular. Heart apex, fifth space within nipple line; action regular; sounds normal except slight accentuation of second. Lungs, liver, spleen, abdomen, and extremities negative on inspection and palpation. The right inguinal canal admits finger and transmits an impulse on coughing. Inguinal and left epitrochlear glands enlarged. There is a small septic phlegmon in palm of right hand. Nutrition good. No anæmia. Slight flattening of lines in lower part of right side of face. Impaired functions of muscles in this region. Tongue, which is somewhat coated, deviates to right. Pupils react to light and accommodation. There is comparative hyperæmia (simple) of the left optic disk and homogeneous diplopia for distance without rotary deviation (Bull). Well-marked diminution of power in muscles of both extremities on right side, with moderate ataxia. On standing with eyes closed and feet together, patient falls to left side. Walking with eyes closed, staggers heterogeneously. Walking with eyes open, reels toward right side. Reflexes, possibly a little exaggerated. Plantar more distinct on left. No disturbance of sensation. Tactile and muscle sense diminished. Pulse, 78, regular, good force. Slight thickening of vessel wall.

December 5.—Has only complained of headache since entrance.

Diagnosis by Dr. Amidon: "Basilar lesion, impinging upon or involving posterior portion of the pons or upper portion of the medulla. Lesion—a small tumor."

Diagnosis by Dr. Starr: "A large lesion (tumor, specific) left lobe of cerebellum near median line, and not near base."

Treatment by inunctions of mercury and iodide of potassium internally; also agents to relieve headache, etc.

December 19th.—Omitted iodide for twenty-four hours. Complains of dimness of vision and heavy feeling in head. Has lost three pounds since December 6th, weighing one hundred and fifteen pounds to-day.

December 20th.—R. Strophanthus m. v., t.i.d.

December 21st.—Stop antipyrine. R. Sod. brom., gr. xx., t.i.d. Patient about the same. Complains of dimness of vision still. No apparent change in condition since entrance, except pain complained of in right arm this afternoon.

December 22d.—Slight epistaxis this morning. Right shoulder very painful. No swelling, no redness, pain continuous, headache severe. Toward evening patient could not move right arm.

December 23d.—Unable to move right extremities this morning. Lesion in brain apparently becoming more extensive. Dimness of vision becoming more marked.

December 24th. Patient about the same. Complains of feeling ill generally. Headache worse.

December 25th.—Some difficulty with speech this morning. More with lingual than labial innervation, and more that of articulation than that of phonation.

December 26th.—In the evening patient was dull and drowsy—throat filling with mucus which patient seems

unable to get up. Has taken no food to speak of on this account during day. Entire right side powerless.

December 27th. — Patient continued to fail during night. Pulse weak and irregular. Became unconscious after twelve o'clock midnight, and remained so until eight o'clock this morning, when he died.

Features of case after entrance: Continuous headache, not affected by drugs to any extent; remained in apparently same condition as on entrance up to about four days before death, when complete right hemiplegia occurred, with pain in right shoulder; patient going gradually into stupor, which became complete unconsciousness eight hours before death; no convulsions or twitching at any time.

Report of Examination of Brain by Dr. Starr.—Appearance on base normal down to junction of pons and medulla. Medulla itself, for a space of one inch from pons backward, was enlarged to triple its normal size by presence of a tumor lying chiefly in its right half and within its substance, and chiefly projecting upon its posterior surface. Restiform body appeared to pass through tumor, and posterior columns of cord appeared to pass over its posterior surface. The eighth nerve passed directly into surface of tumor, but seventh nerve entered above it. Twelfth nerve-roots noways affected, but ninth, tenth, and eleventh nerves passed directly into its substance. Body of tumor projects backward and upward, producing very marked compression of vermiform lobe of cerebellum and of adjacent portion of cerebellar hemispheres, more marked on right side. A marked projection of tumor, at least 1 by 1½ ctm., filled right half of floor of fourth ventricle between striæ acousticæ, and its lower extremity filling up calamus scriptor, and projecting over to left side though not apparently growing beyond raphé.

Measurements of medulla, so far as involving tumor, are as follows: cephalo-cordad, 3 ctm.; meso-laterad, 2 ctm.; dorso-ventrad, 3 ctm.

Circumference of medulla, including tumor, 8 ctm. Section through medulla at lower limit of olivary bodies revealed the fact that the entire structure of medulla had been infiltrated by tumor, so that no characteristic tract or masses of gray matter could be made out upon section. In middle of tumor in raphé a clot was found, upper limit of which coincided with upper limit of section made. Division of cord showed existence of a softening at about three millimetres to right of central canal.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 27, 1893.

CHARLES CARROLL LEE, M.D., PRESIDENT, IN THE CHAIR.

Possible Change of the Annual Meeting.—The question of changing the annual meeting to May of each year, in accord with the suggestion of the State Medical Society, in order that all county medical societies might hold their annual meeting in the same month, was referred to the comitia minora.

The Treatment of the Insane Outside of Asylums.—DR. FREDERICK PETERSON read the first paper of the evening. Not so long ago the asylum for the insane was the prison or jail. It was a wise move to change the name asylum to that of hospital. It had gradually undergone a complete metamorphosis. Still it was not perfect, although almost an ideal form was to be met with in some places in Europe. These, for the most part, were constructed on the pavilion plan. Improvements could be said to be going constantly on throughout the world, and no one was more anxious than asylum superintendents to better the condition of the insane.

Among the greatest checks to progress in this country were politics, lack of money, and insufficient number of medical attendants. He believed the ideal treatment of the insane must be sought outside asylums, but just as the hospital was a better place to treat surgical cases than a tenement-house, so also was the asylum a better place to treat the insane. Only the wealthy class could carry out the ideal treatment in their homes or in travel. The sooner a pauper insane was removed to an asylum the better. In cases of acute insanity in those who could afford a trained nurse, treatment at home was best. Even the asylum did not assure against suicide, as a considerable percentage of the deaths among the inmates showed this cause. On the continent of Europe many hospitals were arranged for the treatment of the acute insane. A similar provision has been made at Bellevue and two other hospitals of this State. It should apply more generally, for in many places the acute insane were sent first to the jail or poor-house. In the larger cities there should be at the disposition of medical faculties for clinical purposes a hospital for the insane which might be called a psychiatric hospital.

Briefly, the author recommended, 1, that there be reception wards or pavilions for the acute insane in general hospitals; 2, the establishment of a psychiatric hospital; 3, boarding out of the quietly insane; 4, an outside department of hospitals for the treatment of certain patients at their homes or who should be brought to the department.

While he was opposed to the strait-jacket, yet there were violent insane who did better under absolute rest in bed, restrained by the dress. The latter part of the paper treated briefly of remedial measures, mentioning the benefits to be derived from hydrotherapy, attention to the gastro-intestinal tract, duboisine, codeine, etc. Moral treatment in the form of argument, often repeated, was sometimes of marked benefit.

Insanity was coming to be regarded by the laity as well as by the profession as a disease, and the treatment, and provisions for treatment, were being improved under that knowledge. The time was approaching when more of the mentally afflicted would be treated at their homes, a still larger number in country houses, by travel, and in psychiatric hospitals, while there would be less tendency to mass large numbers in a single institution.

DR. GRÆME M. HAMMOND thought the treatment of the insane outside of asylums preferable to treatment within them. Only few persons, however, could afford more than the expenses incurred in keeping their dependent insane in farm-houses. But this was much better than constant association with other insane. Such treatment was most effective in the early stage. Hydrotherapy was certainly efficacious. As to drugs, he had found trional superior to sulphonal in some respects, being a hypnotic in smaller doses. He hoped general hospitals would in time have suitable wards for at least the mildly insane.

DR. E. D. FISHER thought it a good plan for hospitals to have a separate ward, like the pavilion at Bellevue, where patients with acute mental disease which ran a comparatively short course could be kept a number of weeks. He also thought one special hospital of this kind in the city would be desirable. But he would be opposed to each hospital having a ward or division where in a general way the insane were to be treated. There was not sufficient interest in such cases in hospitals, especially among internes who, in Bellevue, at least, passed by the nervous department in favor of surgery and general medicine. The farming-out plan could apply only to chronic cases which were not violent and which did not require much care.

DR. GEORGE W. JACOBY agreed with the author. Chronic cases must be kept; acute cases might be treated outside of asylums. But the question arose here, what was a hospital or asylum? It might be a place where there were several hundred patients, or only one. The main point in treatment was to begin early. A general hospital for mental disease would be desirable, especially for teaching students. To put the insane in all hospitals would give a good deal of trouble. Dr. Jacoby empha-

sized the importance of bed or complete rest treatment of certain cases of acute insanity. He did not think trional had any superiority over the older hypnotic sulphonal.

Dr. Ralph L. Parsons said he had read a paper nearly in line with Dr. Peterson's some years ago. The farming-out plan might be carried out with great benefit in cases where the acute symptoms had passed away. The out-of-door life was better than all the amusements that could be devised in asylums. He could not say, however, that he was in favor of boarding out acute cases, far from the oversight of the physician. Wherever acute cases were kept home, this must be made a private hospital. There were few instances in which relatives or friends would give the person proper care for a long period. Private hospitals for the insane had the advantage, that the patients could be seen almost constantly by the physician, while they were free from the objection of large aggregations of the insane.

The Operative Treatment of Hernia in Children, with a Report of Thirty-three Cases.—Dr. William B. Coley read the paper. During the last two years 2,174 new cases of hernia in children under fourteen years had been treated at the Hospital for the Ruptured and Crippled, and a larger number treated preceding years had returned for observation. Out of this number he had operated on thirty-six. The attitude of the profession toward operative treatment of hernia in children was shown in the belief that many cases had been operated upon that ought not, and the tendency to expect uniform and lasting results, or not obtaining this, regarding the operation as a failure. Mechanical treatment, therefore, had been persisted in long after it had in the given case ceased to be of benefit. It would be admitted without argument that mechanical treatment resulted in cure in children oftener than in adults, yet there were many cases which were not cured by this means. There were five classes of cases in which operative treatment was indicated in the hernia of children: 1, Adherent omentum; 2, hernia complicated with reducible hydrocele; 3, irreducible strangulated hernia; 4, cases in which on account of poverty or ignorance mechanical treatment would not be carried out; 5, cases in which mechanical treatment had been tried without benefit.

It was a mistake to suppose that strangulation never occurred in infants, for he had operated in three cases of that kind within a year. The chief objection to operating was the supposition that in children it was more dangerous than in adults, and that the results were less satisfactory. There had not been sufficient data to decide this question. To other statistics the author added a tabulated list of 119 more. Exclusive of strangulated cases the mortality after operation had been 1.5 per cent., while the curative results had been better than in adults. During the past fifteen months Dr. Coley had operated in 36 cases, 33 being non-strangulated. Only one proved fatal, being that of an acute strangulated hernia of twelve hours' duration, there was absolutely primary union in 33 of the cases, suppuration in 2, the only two in which silk instead of animal suture was used. He preferred kangaroo tendon, burying the sutures. They remained unabsorbed three months. A plaster-of-Paris dressing was applied from the middle of the abdomen down to the foot. It was too early to speak of final results. In the two cases of suppuration there had been recurrence. The Schede and Basini methods of operating were employed. Few cases under four years not strangulated required an operation, for almost all could be controlled by a truss at this early period. In three the hernia was of the cæcal variety, four cases were complicated by reducible hydrocele.

Dr. W. B. DeGarmo thought the paper covered a ground which had not yet been covered thoroughly. He had himself long taught that children could be readily cured of hernia by operative measures, and also that most of them under five years of age could be cured by purely mechanical means. This view had been practically indorsed by the reader of the paper, as he had mentioned, four years. If a child had passed the fifth year and had not been cured after two or three years' faithful employment of a truss, operative measures could be resorted to with a fair show of success. Silk had done well in his hands, not having lost one stitch for two years. A suture which lasted but a month would not be of much service in hernia operations.

Dr. Alexander Dallas called attention to the fact that most cases of hernia in children could be cured without a radical operation, while the mortality from the latter procedure, even under the most favorable circumstances, did not fall short of from two to five per cent. He thought the Basini operation was liable to lead to pressure upon the spermatic cord and emasculate the patient.

Dr. Gibney thought the success attained by Dr. Coley the more remarkable, inasmuch as he had been compelled to operate in a room which was almost constantly in use for operations on abscesses and suppurative processes.

Dr. Coley thought Dr. Dallas's objection to the Basini operation unfounded. Even if some pressure should take place on the cord, he doubted whether it would do any harm.

Some Unusual Congenital Malformations of the Female Sexual Organs.—Dr. Paul F. Mundé read the paper. In so-called hermaphroditism the individual could, as a rule, be easily placed in the one sex or the other. Most commonly it was a malformation of the male scrotum and penis, presenting the appearance of the labia and clitoris. He mentioned one or two cases in which it had been more difficult to decide the sex. While he had seen almost every variety of malformation of the female sexual organs, in this paper he would describe only six or eight cases seen the last few years. The first was the case of a well-developed Irish girl who had no vagina, but had a small uterus and very small ovaries, if any. Case two was one of normal vagina and uterus, with absence of the ovaries, in a well-formed woman. Case three was one of perfect vagina, with absence of the uterus and ovaries, also in a perfectly formed woman, with very small breasts. Case four was one of double uterus and double vagina, with congenital closure of the right half in which menstrual blood had collected which was let out by operation. Case five was one of double uterus and double vagina in a young married woman who had suffered intense dysmenorrhœa since the beginning of menstruation. A specialist had applied electricity locally, but the family physician was the first to discover the second vagina and uterus, and thinking this would account for the failure of electricity previously, he employed faradism in the second uterus. The woman continued to suffer, however, and Dr. Mundé then tried the effect of moral impression by assuring the patient she would be cured after he should excise the septum dividing the vagina. Strangely enough, this procedure (excision of the septum) or the moral impression had effected a cure.

The sixth case was one of double uterus, pregnancy of one-half, which was mistaken for extra-uterine pregnancy; laparotomy was done, the true nature of things discovered, the woman aborted and recovered. Dr. Mundé thought this condition might explain some cases reported as tubal pregnancies which subsequently became uterine. The seventh case was one of double uterus, double vagina, the right uterus containing a fibroid. This woman had borne a child, had a laceration of the cervix; the vagina on that side was the larger and evidently had been the one used in copulation, while on the other side was the fibroid. One or more cases were on record in which a woman with a double vagina had gonorrhœa on one side, not on the other; had coitus with two men; one getting gonorrhœa, the other escaping; going to show that both vaginæ were used

Since writing his paper, Dr. Mundé had seen a patient, married, twenty-three years of age, who had never menstruated, who hesitatingly stated that coition was all right, but when he examined her he found a vagina only half an inch deep, no uterus, the ovaries about the size of half a peanut.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, February 23, 1893.

H. J. BOLDT, M.D., CHAIRMAN.

Ruptured Tubal Pregnancy; Collapse; Successful Laparotomy.—DR. CHARLES E. NAMMACK presented the specimen, with the following history:

The specimen presented was removed, February 15, 1893, from Mrs. S——, whose previous history is as follows: On May 31, 1885, she was delivered by a midwife of her first child, after an easy labor, but puerperal parametritis developed and went to the formation of pelvic abscess, which was opened in the left inguinal region by Dr. Fred. Langé, on September 5, 1885. She menstruated at irregular intervals after recovery, until 1889, when her periods became regular. She again conceived, and was delivered of her second child January 10, 1890, by a normal labor. She again became pregnant, in 1892, but aborted at the sixth week, and the abortion was followed by mild peritonitis, with recovery in about six weeks. On January 28, 1893, in the sixth week of her fourth pregnancy, she was seized, after having eaten abundantly and unwisely, with severe abdominal pain and vomiting, associated with flatulent distention of colon. These symptoms subsided promptly under an opiate, and were thought by two physicians to be due to intestinal colic. On February 13th, violent pain and vomiting again developed, together with a sero-sanguinolent discharge from the uterus, and the passage of a fragment of decidua. Digital examination showed the uterus to be enlarged and empty, and that a swelling existed to left of womb. At this time there were no evidences of internal hemorrhage, but on February 14th they appeared, and an experienced gynecologist, who was summoned in consultation, requested that she be removed to hospital for laparotomy, as her home surroundings were thought to preclude the possibility of its successful performance there, and as the patient had become collapsed during his examination. She was rallied with some difficulty, but at 2 A.M. symptoms of collapse again became prominent, and another competent consultant, who was called, stated that in view of her early history of pelvic suppuration, laparotomy would be complicated and tedious, and the patient's best chance of recovery only secured by removal to a hospital.

Consent to this procedure could not be obtained, and at 4 A.M. Dr. Fred. Langé kindly came to her assistance, improvised an operating-table for the Trendelenburg position with a kitchen-table and an inverted chair, and at daybreak opened the abdomen, found the left Fallopian tube ruptured, and the ovum free in the abdominal cavity. Anæsthesia was commenced with chloroform, and then continued with the A.C.E. mixture. Transfusion solution and apparatus were held in readiness, but fortunately were not required. The patient rallied nicely and has progressed thus far in her convalescence without a single unfavorable symptom.

The case seems to emphasize two points: First, that intra-pelvic, suppurative inflammation paves the way for subsequent tubal pregnancy;[1] second, that laparotomy can be successfully performed in the poorest quarter of the town if the operator and his instruments are absolutely clean.

Patient with Double Uterus.—DR. GEORGE M. EDEBOHLS prefaced the history of a patient, whom he presented, with the statement that about two months ago he had occasion to show a woman with a double uterus, the interest in the case centring in the fact that several operations were performed at one sitting: 1, nephrorrhaphy for wandering kidney; 2, curettement of the uterus, and during this procedure it was discovered that the uterus was double, so that both cavities were curetted and washed out separately; 3, the uterus was ventrally fixated. The patient made an uninterrupted recovery, and had since been well.

[1] Lawson Tait: MEDICAL RECORD, XXX., p. 331; A. W. Johnstone: MEDICAL RECORD, XXXI., p. 240.

Last week he had encountered another case of double uterus very similar to the first one, but the true condition was strongly suspected before the operative procedure and was confirmed by this. The patient, aged twenty-six, married, normal menstruation, healthy, had given birth to one child, August, 1892. She began to menstruate again in January, 1893, and aborted February, 12th, the ovum, however, corresponding in size to about the tenth week. Mild septic symptoms followed. Six days after the abortion she came under his treatment. Before proceeding to do curettement he made bimanual palpation and felt a round-like body, seven centimetres in diameter, apparently a tumor attached to the uterus, but on closer analysis he suspected it was an extra-uterine pregnancy and that the abortion had been of an intra-uterine pregnancy. But on putting the curette into the uterus the true diagnosis soon became apparent, for the instrument, when directed toward the left horn, entered twelve centimetres and a half, and then being drawn out about five centimetres and reinserted toward the right it entered nearly twelve centimetres. Between the two uteri was a ridge running antero-posteriorly, projecting downward from the fundus a distance of two inches or five centimetres. The placenta, which remained, was mostly in the left uterus, but projected slightly into the right, the latter being elongated, the former round. He washed out the two cavities separately and inserted gauze.

It would have been very easy for one to mistake such a case for a tubal pregnancy, and even to be misled into operating.

Two Cases of Symphyseotomy.—DR. EGBERT H. GRANDIN reported the cases briefly, reserving a detailed report for a future occasion. The first was one of generally contracted pelvis, membranes unruptured, the head at the brim and unable to engage, the fœtal heart rapid and irregular, the operation being called for to avoid a still birth. Judicious traction with the forceps convinced him that a living child could not be obtained in that way, hence he did symphyseotomy. The mother and child lived. The second case was operated upon three days ago, the patient was four feet seven inches in height, had an infantile pelvis, being about term and in labor, the operation being in this instance an elective one, for when the cervix was three quarters dilated and dilatable he induced anesthesia, operated, turned, and extracted a living child. Both cases had occurred within twelve days, both mothers and children were living, the cases being such as formerly would have called for Cæsarean section. He performed the operation in both instances by cutting from above downward and from without inward, with an ordinary bistoury, until he had reached the subpubic ligament, then took the hooked knife and severed the ligament by an upward cut. The amount of separation in the first case was about two inches and a half, in the second about two inches. In both cases extraction was difficult, forceps being used in the first, version in the second. The head of the first child had about the usual diameters, but the posterior fontanelle was absent, the anterior was only of two-thirds the usual size, so that the head did not mould well.

DR. JAMES E. KELLY spoke of some of the anatomical and surgical points connected with symphyseotomy, and expressed decided preference for the incision practised by Dr. Grandin as opposed to the Italian method of cutting from below upward and from within outward. He would not do as Dr. Grandin did, however, and carry the incision to one side of the clitoris, as division of the erectile arteries might cause some hemorrhage. If by separation of the symphysis in the normal pelvis the antero-posterior diameter were increased three-eighths of an inch, the transverse would be increased three-quarters of an inch, and the oblique one inch.

DR. EDGAR, referring to Dr. Grandin's failure to induce labor by the introduction of glycerine, thought it must have been due to the fact that the glycerine was not introduced far enough, and that it had not been retained. It was true, however, that the method was not infallible, nor were others so.

Dr. Grandin said it was only fair to state that a third attempt to induce abortion in this case, by introducing iodoform gauze into the cervical cavity, and leaving it over twenty-four hours, had also failed, which showed that the uterus was remarkably tolerant in this patient.

Pregnancy in a Ventrally Fixed Uterus.—Dr. J. Clifton Edgar reported the case. He had first seen the woman the sixth day after a former labor, when she was suffering from puerperal sepsis, and had a sensitive mass in the right broad ligament. This was taken for pyosalpinx, and as there were no signs of general peritonitis she was sent to Bellevue, where Dr. Polk performed laparotomy and found the mass composed only of swollen lymphatics, no pus being in the tube. The patient made a good recovery, and was seen by Dr. Edgar again in July, 1892, in the ninth month of her third pregnancy. He recognized the existence of adhesion between the lower anterior part of the uterus and abdominal walls. The shoulder presented, which he converted manually into a vertex presentation, and so maintained it by binder, and told the patient to send for him immediately on commencement of labor pains; but this she failed to do, for several days afterward; when he was sent for, he found she had already been in labor twelve hours, and the membranes had ruptured. In order to reach the cervix it was necessary to pass the whole hand into the vagina. The fœtus was so bent upon itself by an apparent septum dividing the lower part of the uterus in the median line that the head was in the left iliac fossa, the lower extremities in the right, with the body much higher than either. Direct podalic version in the tetanically contracted uterus, with thinned lower segment, was tried, but danger of uterine rupture being imminent, the side of the head was then held over the cervix, perforated, and extraction accomplished very slowly by the cranioclast. The fœtal heart had not been heard. The uterus, as examined by the members of the Section, was found markedly anteverted, with its posterior surface near the left horn firmly adherent to the incision in the anterior abdominal wall.

The Chairman remarked that a number of women in whom the uterus was eventually fixated aborted, some went to term. The reason why, in the present case, it had given rise, as he believed, to no symptoms, was that the uterus was quite movable.

Dr. A. F. Currier had attended one case in confinement after ventral fixation of the uterus, and so far as contraction of the uterus was concerned he observed nothing unusual.

Pelvic Inflammation Following the Puerperal State—Dr. H. T. Hanks read the paper of the evening, bearing this title. He would not attempt to treat of all the points of so vast a subject. The lymphatics generally, and the veins occasionally, were the channels through which sepsis must be conveyed. The severity of the case would depend upon the amount and virulence of the poison and the resistance of the patient. The reasoning that there was no infection except from without was pleasing, but it was not correct. Even with all the care taken in hospitals, there was septicæmia in more or less pronounced form in about six per cent. of all the maternity cases. But the milder cases were cured, so that there was a mortality of less than one per cent., a fact which should give encouragement in treatment to the general practitioner. Formerly the patient had to fight off the attack by doubtful medication in the midst of dirty surroundings. Where there was elevation of the temperature and pulse it meant sepsis nineteen times out of twenty.

The main purpose of the paper was to call attention to the change of treatment of puerperal sepsis which had taken place in recent times, or since the advent of the germ theory. The main basis of treatment was to remove the conditions under which the streptococcus pyogenes was best calculated to multiply, and also to remove the germs already present. Find the place of entrance of the germs, and prevent their further development. The question of just how the sepsis entered the body of the patient was interesting, but could not be considered in this paper. He might say, however, that he was convinced there was auto-infection in a few instances. In other words, he believed some women would have mild septicæmia even if the hand were not introduced into the vagina and no sepsis was allowed to pass the aseptic pad.

All lacerations of the perineum or vagina should be closed. If called to the case after fever had developed, cauterize any lesion, cleanse, etc. If the cervix were lacerated to much extent it should be closed at once, but if the laceration were discovered after the development of fever, etc., cauterize, irrigate, etc. Irrigate the vagina often if the sepsis seemed to be passing into the circulation. Puerperal endometritis was a common form of the disease. It usually developed apparently at the site of the placental insertion. Putrefactive changes were present often, and gave rise to a peculiar odor. The wonderful results of uterine irrigation, as taught by Thomas, had indeed led many to suppose that the uterine cavity was alone the focus of disease, and therefore other parts had been overlooked. One should irrigate the vagina, then the uterine cavity, introduce forceps, remove every shred of membrane, and irrigate again with a germicidal fluid, as bichloride. Irrigation of the uterus might be resorted to again, if the pulse and temperature continued high. If the patient were profoundly septic, and the uterus lay on the pelvic floor, pack it with gauze, plain, or with iodoform. The patient should receive a stimulant, easily digested food, and have general hygienic attention.

A phlegmon might form somewhere in the pelvis, and pus might escape above Poupart's ligament or burrow downward or upward. It was important to distinguish between cases in which the pus was shut off from the peritoneal cavity and those in which it lay within this cavity, ready to burst its limiting walls and infect the peritoneum at any time if nothing were done. By combined rectal examination, the patient being under anæsthesia, one could tell whether the pus were being held firmly outside the peritoneal cavity. If within the peritoneum, open the abdomen; if projecting toward Poupart's ligament, incise, cleanse, and introduce iodoform gauze; if near the vagina, open in that direction, pack and drain. In some cases the tubes were the offending bodies.

Mortality and Morbidity in Puerperal Cases.—Dr. R. A. Murray thought an important point in the paper was a distinction between mortality and morbidity in the puerperal state. It should be remembered that one might meet with a good many puerperal cases and not lose one. But we should not feel that we had done all that could be done for patients unless they were left in as good condition as before pregnancy. But even where there were signs of mild sepsis it should be corrected as soon as possible if we would avoid the development of fatal sepsis in our practice. He thought the author had well said that all lesions occurring during labor should be repaired at once. If temperature developed after labor we should immediately investigate the cause.

Dr. Charles Jewett thought that if the paper was written especially for the general practitioner the point should be emphasized that in the great majority of cases of puerperal sepsis he was the carrier of the poison. Rare cases of prior salpingitis, etc., were, of course, to be excepted. It was possible for the poison to enter through any lesion, but in reality he believed the uterus itself was nearly always the site. Wounds below had better drainage. The results of treatment went to substantiate this view, for the best results, as a rule, followed direct attacks on the uterus. The treatment usually employed by him was douching out the uterus, curettement, packing with iodoform gauze, usually always placing some iodoform at the fundus. Frequent douching was objectionable. Peroxide of hydrogen was a better disinfectant than the weak dilutions of other agents usually employed. If there were a local collection of pus, operate; if there were general purulent peritonitis, there would be little hope, yet he would be inclined to try drainage.

Dr. William E. Forest had found peroxide of hydrogen

one of the most useful agents for combating bad cases. He introduced it through an ordinary catheter by means of a fountain syringe. Commenced early, it almost invariably destroyed the germs.

Inflammation Possible without Germs.—Dr. A. F. Currier thought that while much had been done in establishing the fact that usually infection was by the introduction of microbes, still there was much to be learned regarding the action of these and how to combat them. A few years ago it had been stated that without germs there could be no inflammation, but now it was known that inflammation could arise from chemical action. Like after abortion, so after labor at term, some cases of sepsis were mild, some severe, some inevitably fatal. Drainage was the chief reliance, and for the general practitioner not used to the curette it would be safer to employ drainage alone than drainage with curettement. In general purulent peritonitis abdominal section would not save the patient, and if performed would be likely to reflect discredit on surgery.

Shall the Cervix be Repaired Immediately?—Dr. Vineberg had understood two speakers to say that the cervix should be repaired whenever torn, yet it was seldom that a woman gave birth to a child without some laceration of the cervix. Was it advisable always to sew it up? If one waited until after sepsis it would be too late; if not, then he must sew up the cervix in nearly every case. This, in his opinion, was going back to meddlesome midwifery. Carry out antiseptic precautions in private practice to the extent it was done in hospitals, and there would be little indication for immediately sewing up the cervix except in bad lacerations.

Frequent Uterine Irrigation Recommended.—Dr. W. Gill Wylie said that while the subject was somewhat out of his line, yet it was of special interest to him as his experience began with the treatment of bad puerperal sepsis. He then advocated frequent intra-uterine douching, and his results were extremely favorable compared with those previously obtained under the same circumstances. He was satisfied that was a step in the right direction, and that it was still a good practice when properly carried out. As to the cause of puerperal fever, it had always seemed to him that there must be different kinds of poison, but he thought that which was dangerous to life in the puerperal state almost always started in the uterus. When sepsis took place from an open wound it was most likely to be where there was least drainage. While auto-infection might be possible, he thought the true source was almost invariably by introduction from without. By especial attention to cleanliness it was possible, he thought, to practise fifteen or twenty years and not lose a case from abortion or labor. In puerperal fever not due to a collection of pus, and which did not yield to ordinary methods, he believed washing out the uterus every hour for twenty-four or forty-eight hours with simple hot water, peroxide of hydrogen, or weak solution of carbolic acid, would save nine out of ten cases if not ninety-nine out of a hundred. He had never lost a case which came into his care early. But if washing out the uterus failed, and there were indications of peritonitis, he would open the belly at once.

Frequent Uterine Irrigation Condemned.—Dr. Egbert H. Grandin said it had not been his intention to discuss the paper, but the remarks of the last speaker had rubbed him the wrong way. He had stated that he was out of obstetrics, and if he was going to teach men to wash out the uterus every hour, or every two hours, in order to cure puerperal septicæmia, Dr. Grandin hoped he would stay out. It seemed to him like trying to put out a fire by sprinkling on water with an atomizer. The water only came in contact with the surface of mucous membrane, while the germs were at work below, or in the lymphatics, the tubes, and peritoneal cavity. If sepsis was in the uterus it should be attacked radically from the start. Curette it down to the muscularis with the hard curette, wash out the cavity with bichloride or peroxide of hydrogen, pack with gauze, thus draining and preventing the entrance of more septic material. If the sepsis had entered through a wound elsewhere, or any place except through the uterus, of what service was there in washing out the uterus? The temperature could be brought down to better advantage by the coil on the abdomen. As a result of washing out the uterus several times a day, he was called to a case of bichloride poisoning, the strength of which had been 1 to 8,000. He found an abscess which had burst into the bladder, but he opened it above Poupart's ligament, and the woman got well.

Dr. Wylie said he believed also in emptying the uterus, curetting it, but sometimes it was impossible to do this thoroughly without too great danger of puncturing the uterus, which might be very soft. Frequent washing would at least weaken the sepsis, and he believed the fluid penetrated a little beyond the surface. If there was danger of poisoning, use only pure water.

Dr. Malcolm McLean thought the important lesson to be drawn from the discussion by the general practitioner was that by strict cleanliness he could reduce the number of his cases of puerperal fever at least forty per cent.

Correspondence.

THE ACADEMY AND ITS QUARANTINE COMMITTEE.

To the Editor of the Medical Record.

Sir: I beg that you will allow me to correct the facts, as understood by "X. Y. Z." in his letter to you, in the last number of the Medical Record, in regard to the New York Academy of Medicine and quarantine legislation.

1. It is not true that circumstances beyond the control of the committee interfered with the accomplishment of their purpose. That purpose was to secure a national quarantine law, which should be satisfactory to the medical profession. It was not proposed to confine the work to the national administration then existing, but in case a satisfactory law could not be secured during President Harrison's term, to do all that was possible to get a proper one during President Cleveland's. The committee had assurances from high quarters, that in case any defects were found in the working of the Harris bill, now become a law, that their aid and advice would be needed to make the proper amendments. At the time that they made their report of progress, at a regular meeting of the Academy, their work was therefore just begun.

2. They did not undertake any voluntary work, nor did they go beyond their instructions. They made some allusions to influences at work in the streets of New York and in the Croton water-shed, which might nullify any legislation on quarantine, however thorough. Those allusions were in a temperate spirit, and intended only to arouse the Academy to a proper interest in the prevention of the spread of cholera, should it appear in our harbor.

3. The meeting at which the special committee was discharged was one held without any notice that there would be a report, consequently, besides the committee, there were very few fellows present, except those interested in the paper of the evening, which was of a technical kind, not necessarily involving a large attendance. It is not a fact that no member of the committee objected to the action of the Academy. The President, who is a member of the committee, showed very plainly that he objected, on the ground that the Academy was not prepared to discuss the subject of discharging the committee, and the Secretary, Dr. Derby, stated that he was unaware of any wish of the committee or of Dr. Jacobi, that it should be discharged. It is true, they did not vote against discharging themselves. If they had, the result would have been different. Indeed, it is uncertain if there were twenty-one members, a quorum, present, when the committee was discharged. Only about fifteen voted.

4. The members of the special committee did not plead to be reinstated. Ten fellows, not connected with the

committee in any way, feeling that a discourtesy had been committed by the Academy, asked the President to call a special meeting. The special meeting, it is true, replaced them by a close vote, but it was a clear majority of ten, many of the committee being absent, and some of them not voting; while, as is well known, the most strenuous efforts had been made by those who wished to discharge the committee to secure a large attendance of those opposed to national quarantine. The committee was willing to let the matter be decided by those who might voluntarily attend. Besides all this, I would inform your correspondent that it is very improbable, as he suggests—it is indeed incorrect to state—that even one member of this large committee, representing the various parts of the Academy, can be found who is not in full sympathy with those who voted to reinstate them.

Finally, if any bad blood was engendered, those who made the mistake of not being sufficiently informed as to what Dr. Jacobi's desires were introduced a motion to discontinue the committee—at a slimly attended meeting, when not one member of it had any idea that such a vote was to be taken—must bear the blame. Any careful observation of the profession, in and out of the Academy, will show that it is overwhelmingly on the side of the majority and in favor of the consideration by that body of large political questions in an unpartisan way, so long as they have reference to the sanitary condition of the State and the country.

Respectfully yours,
A Fellow of the Academy.

March 6, 1893.

ON ACUTE INFECTIOUS PHLEGMON OF THE PHARYNX.

To the Editor of the Medical Record.

Sir: The rejoinder of my esteemed colleague, Dr. A. G. Gerster, to my article on this subject in the Record of March 4, 1893, only emphasizes the reasons which actuated me in the publication of the case. Without desiring to court controversy, permit me to state why Dr. Gerster is mistaken in considering the case one of angina Ludovici, and why he is further mistaken in saying that deep incisions should have been made. Perhaps I may succeed in winning him over to my view. The subject is certainly of great interest to the practitioner of medicine.

The patient was seen by me for the first time the evening of October 20, 1892. Examination revealed a characteristic follicular tonsillitis (left), œdematous swelling of the faucial pillars, of the glosso-epiglottic folds, and of the mucous membrane and submucosa of the left oropharynx; he suffered from marked dysphagia, was almost voiceless, showing that the collateral œdema had extended into the larynx; in short, he presented the appearance of a patient suffering from a severe attack of quinsy.

Does such a symptom-complex warrant the diagnosis of angina Ludovici? The following morning there was some swelling of the submental connective tissue, consecutive to the tonsillar and pharyngeal inflammation; the infiltration extended up the left side of the neck to the left parotid gland; there was no marked glandular swelling.

After, or with, malignant scarlatinal diphtheria, such inflammatory infiltration of the glands and tissues of the neck is frequently seen; it seems to me that the name angina Ludovici is as inapplicable to this condition as it is to the condition presented by my patient; in both instances there is a lymphadenitis with implication of the surrounding tissues, due to infection.

Angina Ludovici, as I understand the term, is a primary inflammation, diffuse and usually very painful, of the soft tissues of the chin and neck, accompanied by œdematous swelling of the tongue and of the tissues of the floor of the mouth; in which there exists a marked tendency to necrotic processes in the tissues; in short, it is a deep-seated phlegmon of the submental and submaxillary connective tissue, in which deep incisions serve to relieve tension, and frequently to evacuate ichorous pus and shreds of necrotic tissue; recovery is not infrequent. In my case, the swelling was at no time great enough to indicate incision. I saw the patient three times in all, covering a period of twenty-four hours; at my third visit, twenty-four hours after the first, the submental swelling had almost entirely disappeared, leaving the dense and indurated swelling under the left angle of the jaw, almost painless. Thirty six hours after my first visit the patient was found dead in bed.

In view of the opinion of Senator, who was the first to give this peculiar train of symptoms the name "acute infectious phlegmon of the pharynx," that incisions into the swollen connective tissue are useless, and perhaps only serve to hasten the inevitably fatal result, I submit that operative interference would have been unwarrantable and injudicious; had I made deep incisions, the responsibility for the patient's death would have rested on my head, nor could I have authoritatively denied the accusation.

All the cases reported, excepting one, have ended fatally, operation or no operation, and generally speaking, all the cases were very similar to mine in their course.

There obtains in these cases an acute infection which overwhelms the nerve centres, paralyzing the heart; in nearly all the reported cases the patients were strong, healthy men in the prime of life, with excellent previous histories.

There were no pressure-symptoms in the respiratory tract, at any time, in my case, requiring relief by incision of the connective-tissue swelling; nor was there any severe pain or any marked tension in the swelling itself.

The patient's wife, who lay on a cot in the same room, watching him all night, stated that she thought he had fallen asleep early in the morning. When, on my arrival, I told her that her husband was dead, she was shocked beyond measure. This quiet on-coming of death certainly speaks against obstruction of the upper air-passages, from either pressure of an inflammatory swelling or from laryngeal œdema, as the cause of the fatal ending.

Would deep incisions have had any modifying influence? I think not. Had I suggested deep incisions the morning of my second visit (October 21st), when I first noticed submental swelling, I certainly could not have given a valid reason for making such a suggestion; naturally, the consent of the patient would have been unobtainable. Seventy two hours, which I give as the period of the illness, is partly conjectural. I judged from the appearance of the pharynx, and from the statements of the patient's wife, that he had been sick about two days previous to my first visit. In this brief period the disease ran its entire fatal course.

Dr. Gerster's criticism that in phlegmon of the pharynx necrotic foci should appear is perfectly correct; had my patient lived long enough, I have no doubt that necrotic foci might have manifested themselves in the pharynx.

In closing, I must admit that when my patient died, I was only sure of this: That I had had a case of acute œdematous pharyngo laryngitis and follicular tonsillitis, with implication of the soft tissues of the neck, ending fatally from heart paralysis thirty-six hours after my first visit.

In looking through the literature, I found the interesting articles of Senator and Bosworth, describing symptoms and a course almost parallel with those I had observed in my case, and giving the disease the name mentioned at the head of this letter.

Post-mortem examinations had been made in all of Senator's cases, showing that an infection of the organism was the cause of death.

I therefore cannot admit that my patient suffered from angina Ludovici, nor that I was guilty of any omission in not plunging a knife into the swollen tissues.

Yours, very truly,
Samuel Kohn, M.D.

805 Madison Avenue.

THE MEDICO-LEGAL VALUE OF THE SPHYGMOGRAPH.

To the Editor of the Medical Record.

Sir: Knowing the reputation of the Record for exactness of statement, it is somewhat surprising to find the editorial mention of a purely fictitious occurrence in the Schneider case in Washington, in which Drs. J. B. Chapin, of Philadelphia, and C. A. Dana, of New York, acted with me as a commission invited by the Government to take testimony and examine the prisoner, who was pronounced a malingerer.

The only sphygmographic tracing introduced in evidence was one submitted to Dr. Brush, one of the most intelligent and experienced witnesses for the prisoner, who characterized it as a normal tracing, which it was. No other tracing was "introduced in rebuttal," and there was no controversy as to the influence of tobacco or the value of sphygmographic results in insanity. Evidently you have been misinformed, or the Record has been made the victim of some designing person.

Allan McLane Hamilton, M.D.,

New York, March 11, 1893.

New Instruments.

NEW TUNNELLED SOFT CATHETER.

By WRAY GRAYSON, M.D.,

Washington, Pa.

A short time ago I was attending a gentleman suffering from a grave attack of typhoid fever, Dr. Thomas McKennon, of our town, being consulting physician. The case was not only complicated by a moderate permanent stricture in the forward part of the urethra, but there was also a most annoying spasmodic condition of the canal farther back. Notwithstanding the use of anodynes, anæsthetics, and other means used in such cases, the urethral condition would most persistently assert itself. After the failure of any other mode of relief, we at length succeeded in passing a whalebone guide, and over this a small-sized tunnelled silver catheter. Wishing to introduce a soft catheter to remain for a short time, we threaded one of Tiemann & Co.'s velvet-eye instruments on the guide and passed it without much trouble into bladder. The idea at once occurred, why not so modify the soft catheter as to make it available for such emergencies. Communicating with Messrs. Tiemann & Co., of New York, they very courteously acted upon our suggestion and produced a soft tunnelled catheter, a cut of which is here shown. It is made, as will be noticed, on the principle of the ordinary tunnelled catheter. By making the guide opening in the position it is, preserves not only the conical form of the vesical tip, but also the solidity of the same end. It is also an advantage not to have the whalebone guide pass through the catheter proper, as in case of its being necessary to use a very small-sized instrument the calibre of the tube is not interfered with. The catheter as made can be used as an ordinary soft catheter, in addition to its use for the purpose for which it is especially intended.

The catheter, as offered to the profession by Tiemann & Co., will, I think, render more useful an already very valuable instrument, and greatly aid one in the management of what are often very troublesome cases. After the introduction of the whalebone guide, we can often without especial difficulty pass the tunnelled silver instrument; if in suitable cases the tunnelled soft catheter can be substituted, there is good reason to expect that the same advantage will attend its use as obtains when soft instruments take the place of the ordinary metal ones.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 11, 1893.

	Cases	Deaths.
Typhus fever	17	3
Typhoid fever	20	6
Scarlet fever	184	22
Cerebro-spinal meningitis	5	6
Measles	119	7
Diphtheria	91	33
Small-pox	14	1
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

Vital Statistics of Japan.—During the past twenty years the population of Japan has increased very rapidly; while in 1872 it was 33,110,000, in 1890 it had risen to 40,070,000, and the increase has been well maintained since then. At this rate of progress it is estimated that Japan will in about fifty years have a population of 80,000,000. A native economist, Mr. Ourakami, attributes the rapid increase of population in Japan partly to the growth of national wealth, but chiefly to the low death-rate among infants. It appears that next to France Japan has the lowest birth-rate of any known country, but this is counterbalanced by the conservation of infant life. In fact, in point of infant mortality, Japan at present stands next to England among the nations of the world. Thus while in Russia the death-rate per 1,000 among children under five years of age is 423, in Bavaria 405, in Austria 390, in France 341, in Prussia 335, in Japan it is 276, and in England 255. The proportion of the sexes in Japan is 100 boys to 97 girls. The number of aged people is also somewhat surprising. Thus in 1890 the total number of centenarians was 177, the oldest individual being credited with 107 years. Of nonagenarians there were 11,245. During the year 1890 there were 325,141 marriages and no less than 109,088 divorces.

Exercise.—The Right Honorable Joseph Chamberlain, in a speech at Birmingham, in England, in presenting the prizes after an athletic competition, told his audience that he, personally, did not much believe in exercise. He then went on to say that he never rode a bicycle or a horse, or played cricket or football or tennis, or even golf, in spite of the fact that the latter game was considered almost indispensable for British statesmanship. He does not even walk if he can help it, and in fact, takes no exercise at all, in spite of which there is no doubt that he is in as good physical condition as could be desired.—*Boston Medical and Surgical Journal.*

Toads and Their Poison.—Popular myths die hard, even when science has done its best to dispose of them. One of these has reference to the poison capacities of the toad, "ugly and venomous," as Shakespeare has somewhat impolitely described the batrachian. Popular belief usually endows the toad with the power of ejecting poison from its mouth in the form of saliva. But Boulenger has distinctly pointed out that the toxic element in the creature is situated in follicles of the skin along the back, whence secretion takes place under the influence of irritation. The Chinese have for long made use of the secretion from the back of toads, but for what purpose has not been definitely explained. The secretion is obtained by prodding the animal in a vessel containing flour. Scientifically the same result is attained by a hypodermic injection of chloride of barium, which causes the toad to perspire freely. Its toxic effects, when administered to man or animals, resemble those of digitalis.—*Medical Press.*

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Original Articles.

THE APPLIED PHYSICS OF PHYSICAL DIAGNOSIS.[1]

FIRST PAPER.—ACOUSTICS.

BY CHARLES E. QUIMBY, A.M., M.D.,

NEW YORK.

IT was Talleyrand, if I remember aright, who said that "Language was given to man to conceal his thoughts."

There is a minor grade of hope, coupled with the discouragement of this statement, in the knowledge that language is capable of subserving any exact purpose, which becomes major when we recognize that admitted power to conceal involves a potentiality at least of revelation. But the sting of the sarcasm lies in the truth of the implication, that what should be a Damascus blade for intellectual conflict is made a barbaric boomerang by mental apathy. As an indication of the possibilities when words are used with attempted precision, the statement is, perhaps, sufficiently suggestive of controversial difficulties; but for random discussion with indefinite terms, it is impotent even to suggest the resulting mental chaos.

Among the host of accommodating terms which we employ with a carelessness fully justifying any degree of elastic significance, probably none convey more vague ideas than those used to designate so-called physical signs. This fact becomes oppressively patent in attempts to communicate personal auditory impressions of the sounds produced in any given chest. Nor do we achieve a conspicuous success in our efforts to extract consolation from the consciousness that our verbal pictures are no more ragged in their outlines than are the conceptions they so vainly struggle to depict. Our "confusion" the rather becomes "worse confounded" as we appreciate that inability to give definitions arises from lack of possession. Yet this knowledge were cheap at any cost, since, in disclosing the truth that a definition is not words, but *an intellectual differentiation of one entity from all others*, it removes every doubt as to the fundamental cause of our present difficulty.

That the nomenclature of physical diagnosis is at present in a condition of most annoying confusion, was conclusively proven at a meeting of the Section on General Medicine of the Academy, held in January, 1892, when, with cases presented to determine just this point, it was the exception that any two of the gentlemen present, among whom were teachers of physical diagnosis, used the same term to designate any given respiratory sound, notwithstanding the comprehensive character of these terms. A leading work on this subject states definitely, that "rude respiration embraces every modification between normal vesicular and bronchial respiration." Moreover, that descriptions of the physical phenomena, designated by current terms, contain so many words of relative significance as to prevent any definite value, is pertinently illustrated by this description of bronchial breathing: "The inspiration is of tubular quality, of higher pitch, of marked intensity, and of considerable duration. The expiration is of tubular quality, of higher pitch, of greater intensity, and of longer duration than inspiration." Here every definitive word is comparative, and the only standard given for valuation is the equally indefinite term "low" in the preceding paragraph. Simple justice demands acceptance of my statement, that, this and similar quotations are not made in criticism, but are used to demonstrate the indefiniteness of the thing described, solely because the absolute accuracy of the description gives it unequalled value as illustrative and conclusive proof.

It requires no special acumen to appreciate the forces productive of these conditions, or to see them as natural, if not inevitable, misfortunes, for the history of physical diagnosis affords an obvious, as well as instructive, illustration of the development of most practical sciences.

In the earlier stages, when facts are received on sufferance instead of being sought for, only gross phenomena and superficial relations are recognized, while logical analysis is absent, or sporadic and tentative.

Following this comes a pre-eminently analytical period. The transition is frequently abrupt, and the process often pushed to such unjustified extremes, possibly even by illegitimate methods, as to provoke equally intense reaction with indiscriminate rejection of truth as well as error. When developed under the restraints of judicial conservatism, however, the returns in scientific accuracy, definite methods, and permanent results are of inestimable value. Yet the peculiar value of analysis involves a proportionate danger. Increasing technical skill, which is the inevitable result of constant repetition, begets impatience of details, by minimizing their personal value, and initiates a progressive tendency to more comprehensive and rapid methods; to deal with products rather than processes, until finally the latter are abandoned entirely.

In this evolution habit, or thoughtless failure to appreciate the change, may cause retention of terms and motions long after the processes they represent have become empty, deceptive forms.

It is essentially this position which physical diagnosis appears to occupy at present. We recognize products and call them processes; reasoning by results in place of relations. We have accepted dicta instead of demonstration; regarding "when" as "why," and honesty as proof of accuracy. We cling to our terminology in perfect good faith, never suspecting that our symbols have become cymbals. The effect upon methods of instruction was inevitable, and developed with a certainty and rapidity directly proportionate to the skill of the teachers. Gradually and unconsciously the most complex products became, to them, so familiar as to forbid a just appreciation of their bewildering intricacy to the eyes of ignorance. Final results are manifested by the prevailing demonstrative methods of teaching physical diagnosis. It was in accordance with these methods, that, now some six years ago, I first essayed to teach this subject. For a time faith magnified meagre results to acceptable, because deceptive, proportions. But the crucial test of teaching soon forced an unqualified admission of failure, and disclosed the cause in personal ignorance. The consequent study, which aimed to remove this cause, was based upon the following directive and definite statement, found in Professor Loomis's work on "Physical Diagnosis:"[1] "To estimate the value of percussion, and to understand its true significance, you must first learn *to appreciate correctly the elements of sound*. . . . Those elements or acoustic properties of percussion sounds, which concern us clinically, are termed,

[1] Read before the New York Academy of Medicine, February 16, 1893.

[1] Edition of 1887 p. 23.

respectively, *Intensity*, *Pitch*, *Quality*, and *Duration*, of which *Pitch* ranks first in importance."

The term "Physical Diagnosis" strictly implies only determination of the physical properties of the body tissues, and, although extended by common consent to include recognition of specific causes of such properties, is still restricted to those cases in which the physical factor maintains at least a superficial prominence. Thus, clinically, the product so universally recognized by this term, involves the combination of three sharply defined factors. These factors are:

1. Accurate knowledge of the anatomy, physiology, and pathology of the tissues in question, and of the principles of physics involved in such investigations.

2. Possession of the requisite technical skill, and its application in making the first factor specific for any given case.

These two factors are sufficient for a purely physical diagnosis. They give definite and absolute knowledge of physical conditions, and of these only.

It is the third factor alone which transforms these lifeless facts to most potential measures for the recognition of disease.

This factor is the intellectual estimation of the diagnostic significance of a pure physical diagnosis, as proof of specific disease, from its relations to all associated or precedent symptoms and conditions. As factors in a *clinical* physical diagnosis, the first is solely a question of accurate information and memory; the second, of trained mechanical skill and quickened sensory acumen.

The third is a question of *brains* and *the man*, which will dominate in the future, as it has in the past, the relative value of diagnosticians. To the man of genius, who deals with totals, the first factor may be of minor importance. For any who may have mislaid their genius, or neglected to make necessary repairs, this attempt to restore the factor of pure science to its legitimate position in diagnosis, and render it available at its full value for both teaching and practice, may not be entirely devoid of interest. To prevent repetition and delay, permit me to offer any standard work on physics as authority for all statements of physical principles, or facts, whether quoted formally, in substance, or employed simply by implication. My own references have been largely to Ganot, Atkinson's translation.

Physical analysis of sound, using this term in its exact significance of *auditory sensations*, has shown that the ultimate sound-unit is the result of isochronous vibrations of matter, manifesting but three phenomena, each of which produces a characteristic sensory impression. These material vibratory phenomena and their sensory indications, known as the elements of sound are: 1. Rapidity of vibrations, determining pitch. 2. Amplitude, or extent of vibrations, fixing initial intensity or loudness. 3. Continuance, the primary cause of length of sound.

While this ultimate sound-unit of physics, caused by a single set of vibrations with three inseparable phenomena, and therefore presenting only the elements of pitch, intensity, and duration, must never be lost sight of as the basis of all sounds, it is equally important to remember, that the unit of applied acoustics is determined solely by the ear, and that this unit, even with the maximum limit of auditory acumen, is, of necessity, a complex product, since the relations and properties of matter render the development of multiple sets of sonorous vibrations an inevitable accompaniment of the excitation of one such set. The physical demonstration, by which all auditory impressions are shown to be multiple, discloses limitations to our powers of auditory analysis that instantly assume a position of fundamental importance, as determining the sole clinical standard for estimating the composition and elements of sound.

It will be useless for anyone to read further, who does not clearly recognize the significance of this relation as the point of contact between pure and applied acoustics, and appreciate that the transition to the latter involves the introduction of a variable personal factor, and its constant presence in every problem of applied acoustics.

The general character of these limitations may be illustrated by drawing a pencil across the teeth of a comb, slowly at first, and then with increasing rapidity, until, what at first are distinctly separate strokes, become merged into one rough sound with distinct pitch. They are the direct analogue of our ocular limitations, as demonstrated by Newton's disk. We thus have an auditory unit for clinical work, determined negatively rather than positively; subjective, not objective; dependent upon reception and perception; absolutely independent of inception; but a most fruitful source of deception; a unit which derives an especial and unique value from absolute independence of the origin of its own cause. Yet it is just this indefinite, fluctuating unit, in which danger and value are each the cause of the other, this unit of *effect*, not *cause*, which we are compelled to use to measure sums of *cause*. Much confusion and many errors have resulted from failure to recognize this relation, and the consequent necessity, that any sonorous unit, which contains terms of multiple origin and depends for its singularity upon fluctuating auditory acumen, cannot, *per se*, possess any fixed elements.

While all manifestations of elements, as properties of complex sounds, are thus made possible only by our inability to separate the terms, these elements are nevertheless determined solely by ratios between the component terms. Consideration of these elements as auditory sensations, in connection with their causative phenomena, will show that pitch is, essentially, the only qualitative property peculiar to sound, and that intensity and duration are practically quantitative properties of pitch, although of independent causation. Recognition of these double relations enables us to appreciate more readily the physical demonstration that pitch, as an element of a sonorous sum, is derived from the term of greatest intensity. Moreover, since the remaining terms, as sound-units of distinct pitch, are evidently not nullified, it should have been obvious that each term develops its special sensory impression, aside from any modifying effect it may have upon the dominant term. Nevertheless, it required Helmholtz's brilliant experiments to demonstrate our recognition of these associated sensations in the element designated quality, and to make plain the peculiar significance of this element as a phenomenon *solely of composite sounds*, and the *sole inherent element* of such sounds, the element characteristic of sensory limitations, when compared with the three fundamental elements, as representing inseparable phenomena of physical sonorous vibratory units.

This relation has received, comparatively, but little consideration even from physicists, because the practical application of acoustics has been confined almost entirely to the art of music. The utterly opposite character of that art compared with this of physical diagnosis, is clearly shown by the fact that in music the problem is one of sound *production*, while in physical diagnosis it is one of sound *interpretation*. In the former the objective point is sensual gratification. Therefore, with conditions of sound-production under control, predetermined results are attained and made certain by elimination of all uncertain and uncontrollable conditions. In the latter the value of results is due, pre-eminently, to the uncontrollable character of the sound-production and the conducting media. Helmholtz's original analysis, which established the multiple character of all auditory impressions, coincidently proves that the same forces impose fixed ratios, numerical as well as elemental, upon sonorous terms of identical origin, *i.e.*, in a single sonorous body. Quality, then, as an element of sounds of single origin is, plainly, as fixed and definite as pitch. The impossibility of any such constant relations in sounds of multiple origin is no less obvious than that singularity of sounds, when determined by auditory standards, has no necessary relations to the origin of component terms. Sound-units thus separate naturally into two classes as composed of terms: 1, Of mutually dependent origin in a single sonorous body; 2, Of multiple, and therefore independent, but not un-

related, origin. I desire to call special attention to the fact, that in the first class each sonorous term possesses only the elements pitch, intensity, duration, and does *not* possess quality; while in the second class, which includes most thoracic sounds, quality of the auditory unit is derived from terms each of which presents quality and pitch in a fixed ratio. Therefore, since all the elements of any thoracic sound of multiple origin depend upon term-ratios, for every change of pitch in such sounds, quality must undergo coincident and proportionate change. Pitch, which is susceptible of exact measurement and record, thus may become an equally exact measure of quality. This principle is of the utmost value in physical diagnosis, yet, so far as I can learn, it has never before been recognized or appreciated. Its application, moreover, is not limited to respiratory sounds, but is equally available in localizing râles or estimating any tissue-changes modifying pitch of thoracic sounds.

To attain sharper distinctions, and consequently greater accuracy, it becomes necessary to indicate the significance attached to certain terms. Hereafter, therefore, the term *pure*, as modifying sound, will define the ultimate physical sonorous unit from a single set of vibrations, possessing pitch, intensity, and duration, but not quality. Similarly, *single* will define the auditory unit of single origin, in which the terms are pure sounds producing a pitch and quality of fixed ratio. *Composite* will describe the auditory unit in which the terms are single sounds: while *compound* will indicate a sonorous sum which can be heard at will as one or more composite sounds. The power of auditory analysis, implied in this definition, is of the utmost importance. Nor is it possible to ignore the fact that transition from composite to compound sounds, or *vice versa*, is dependent upon auditory analysis, and that, under proper training, one's capacity in this direction may be so developed as to extend the limits, within which singularity or multiplicity of sounds is subject to the will, to an exceedingly valuable degree as measured by clinical results. For some years, even before the present study was undertaken, it had been a matter of extreme personal interest to see how rapidly skill in this direction may be increased, as proven by the conscious separation of one instrument from all others in an orchestra. My ears, however, do not yet disdain ocular assistance in disentangling the oboe and bassoon. This numerical analysis of sounds is, so far as I am aware, not generally employed. It nevertheless affords many most valuable indications of pathological changes not otherwise obtained.

The foregoing physical principles and relations are the basis of the following propositions in applied pulmonary physics:

1. When composite sounds are employed as exponents of their material source, the first differentiation should be numerical, as between a composite or compound sound.

2. Since the distinctive elements of pitch and quality in composite sounds are dependent upon ratios of intensity between terms, their full significance can be estimated only after determination of the relative value of the two factors of intensity; *i.e.*, initial intensity and transmitting media. (Illustration: Weakness of respiratory sounds with increased vocal resonance must depend on initial intensity. Weakness of respiration with diminished vocal resonance must depend in part on transmission.)

3. Although pitch of a composite sound cannot change without change of quality, the reverse is not true. On the contrary, every conceivable combination of terms with an attendant new quality may be developed without change in pitch of the composite sound, so long as one term maintains a dominant intensity.

I am convinced that failure to recognize this fact has been a prolific source of error in physical diagnosis. The error has been, primarily, in assigning a value to pitch in *composite* sounds upon the basis of pitch values in *single* sounds. Notwithstanding the liability to error from this cause, the peculiar value of pitch in clinical work is largely dependent upon the composite nature of the sounds considered; it even acquires a double value since by persistence as an element of single sounds it is an index of local conditions at the point contributing that term, and, as an element of composite sounds, it serves to measure variations in transmitting media.

Demonstration of these propositions in connection with percussion and auscultatory sounds, as related to pulmonary disease, presents the following problems:

1. To determine their composition and the practical or desirable limits of analysis.

2. To ascertain the origin of the terms, as defined by the primary analysis, and their general and specific relations in determining elements of composite sounds.

3. To establish rules for estimating absolute and relative values of elements in composite sounds as indices of tissue-changes.

4. To define the relations of physically defined composite sounds, as associated terms, to current descriptions of these sounds, for the purpose of establishing accurate definitions.

5. To ascertain the degree of skill required to make practical use of pure physics in physical diagnosis.

The present paper is limited to a consideration of composition and general pitch relations.

An examination of current works on physical diagnosis justifies the statement that "percussion sound," "percussion tone," "percussion resonance," and "percussion note" are used as essentially synonymous. In no case, have I found any suggestion of more than one sound possessing diagnostic significance in the percussion product. All authorities speak of variations in pitch of "percussion resonance," in terms that necessitate the existence of such relations between resonance pitch, and tissue-changes, as are definitely indicated, in some cases, by the specific statement, "that pitch of percussion resonance varies directly with the volume of pulmonary air."

The fact that resonance, as a sound of peculiar origin, is so frequently a component term of composite sounds, imparting a characteristic quality necessarily defined as "resonant," has obscured, if not destroyed, the distinction between the substantive and its adjective. Confusion on this point has been increased, if not directly caused, by the failure on the part of physicists to make ultimate, or perhaps more exactly, sufficient, definitions. Even in so recent a work as the "Century Dictionary" "resonance" is made to include these three distinctly different acoustic phenomena: 1. The sonorous confusion and intensification caused by multiple reflections of sound within definite limitations of distance. 2. Vibrations in unison with, and reflection of, a precedent sound, by a solid body; and 3. Unison vibration of definite amounts of partially confined air. This definition, moreover, is, essentially, in accord with the statements of physics. My objection is not to the use of the term to indicate every form of resounding, but to its unmodified application to either form of resonance as convenience may direct. In the first case, its application is entirely indefensible as a scientific term, since the indicated phenomenon is purely a reflection of existing sonorous waves, and is not the initiation of new vibrations. Moreover, it is, admittedly, a question of distance only when resonance becomes echo. In the second case, also, reflection plays quite as prominent a part as does strict resonance.

The third form alone is properly called resonance, since it is the one universally understood in scientific discussions. Its peculiar significance and value are derived from limitations of the re-sounding to a single sound, determined by the resonant cavity, independently of the primary sound as regards pitch and quality. Acceptance of the multiple significance of "resonance," in common usage, cannot disguise the fact that in physical diagnosis it is universally accepted as due to atmospheric vibrations in the pulmonary air spaces. As a vibratory result, then, of the percussion blow, it is initiated by a transmitted motion. This motion, therefore, as the result of the same

blow, must represent material sonorous vibrations, coincident with resonance throughout; for they are not simply precedent to resonance, but subsequent as well, since the resonance vibrations reach our ear only after passage through the chest-wall, in which, passage is equivalent to vibration of the conducting media. We are offered but two horns to the dilemma. If the sound from the thoracic wall is no part of percussion sound, as commonly understood, it is imperative that we hear the resonance entirely separate from this sound. That is, we must admit and clearly differentiate two sounds as the result of percussion.

This certainly is not done. On the other hand, since we must admit that every percussion blow excites sonorous vibrations in two distinct tissues, the thoracic wall and pulmonary air, to define the resulting sound as single and yet ignore the influence upon that total of the sound precedent to, and causative of, the accepted portion, when such causative vibrations are clearly of independent origin, is simply impossible in a scientific discussion. This thoracic sound, therefore, demands recognition and valuation, as the primary vibratory cause of resonance and a modifying factor in resonance transmission. Investigation of this sound from the physical stand-point, in connection with its relations to the thoracic contents and tissue-changes, justifies such demand and establishes its position as the major term of the percussion product. It therefore requires a definitive name.

Note is simply numerical; sound is generic and would require a descriptive adjective. Tone is not, at present, detailed for special duty, and is sufficiently appropriate as it defines a sound of distinct pitch and implies further differentiation by quality. With the previous definition of percussion resonance accepted, the entire sonorous product of pulmonary percussion becomes a dual compound sound, containing the terms "percussion tone" and "percussion resonance." Clinically, percussion tone is the exponent of solid tissues, and percussion resonance of pulmonary air-spaces.

I have not found any practical consideration of the composition of percussion resonance. Accepted statements are limited to defining the cause, direction, and degree of variations in resonance pitch, and are based, first, upon the definite physical demonstration that resonance pitch is fixed by the resonant cavity, and, under given conditions of atmospheric tension, is not subject to modification; second, upon the tacit assumption that the pulmonary air-space acts as a single resonator. Demonstration of the truth of this assumption is proof of the accuracy of accepted statements.

But physical investigations have shown that the boundaries of resonant cavities are determined by the limits of uniform atmospheric compression.

In the lung, therefore, each bronchial tube must act as an independent resonator, contributing to the resonant total a term of fixed pitch and quality. The resonance sum thus becomes a composite sound, in which the single sound terms form a consecutive series from the trachea or primary bronchus, to the limit of sound-production, with pitch ratios proportionate to those of the bronchial volumes, and the inferior pitch limit in the tracheal term. Under physical relations determining pitch in composite sounds there are clearly but two possibilities for definite pitch in normal percussion resonance as the sum of such a sonorous series. Now, in advancing pulmonary consolidation, which eliminates the small tube, and therefore high-pitch resonances, the large tube, or low-pitch terms, must acquire a relative increase of intensity. Therefore, assuming as the first possibility, dominant intensity for the distal terms and consequent high-pitch normal resonance, that pitch must undergo progressive lowering as consolidation advances, with a limit at the point where tracheal resonance becomes the pitch term.

Again, assuming that the ratio is in favor of the tracheal term and normal resonance thus of low pitch, the same progressive consolidation can only affect the quality of resonance as determined by distal terms, and by purifying the sound make more prominent the pitch note, thus emphasizing its persistence. As no irregular ratios of intensity in the resonant series are supposable, it is plain that no condition can give percussion resonance with higher pitch than normal; and only with normal resonance of high pitch can resonance pitch be changed by pulmonary consolidation.

Although not strictly pertinent to a discussion of relations only, one form of intensity ratios in resonance terms is, perhaps, appropriately indicated here. It is evident that in this resonance series, starting with the trachea, each bronchial bifurcation adds two new terms. Thus, even if the tracheal term is strongly dominant at first, there may be a point at which the multiple additions will overpower this term some distance from the end of the series. The effect upon percussion resonance, however, would be simply one of degree. For if this ratio were actual, normal percussion resonance would be of high pitch, and undergo gradual lowering under consolidation to this suppositional point, and then take a sudden drop to tracheal pitch.

For some years I have used a definite pitch of percussion sounds, as determined by the tuning-fork, in both private work and teaching, but always with some doubt as to the accuracy of my ear. When, therefore, in the summer of '91 an opportunity was afforded to test my auditory acumen under the direction of Mr. Theodore Thomas, it was not lost. The test was made on a patient with distinct dulness at the left apex, from tubercular infiltration. Thinking to make sure, first, of the identity of the sounds we were considering, I made percussion at the right apex over an essentially normal lung, at the same time asking Mr. Thomas if he appreciated a distinct resonant sound of definite pitch. Without the least hesitation he replied, in substance, "Certainly! That note is G—no, wait, it is not exactly G—it is a shade lower but not quite down to F♯." Turning then to the left apex I asked, just before percussing, "Now, how much higher is this sound than the other?" Almost with the first stroke came the question, in a tone of surprise: "What is that? How much higher?" Striking again I said yes, and repeated the question. The immediate reply was, "Not any! It is precisely the same pitch, and differs only in volume." Numerous repetitions removed all doubt as to the identity of the sounds heard, and suggested the explanation of the seeming paradox.

Some ten months later, in the spring of '92, it happened, by pure accident, that I used the same patient to illustrate to Mr. Walter Damrosch the nature of some questions I desired his assistance in answering. Again I percussed at the same right apex, asking the same question as of Mr. Thomas. Stepping to the piano and striking three or four notes, Mr. Damrosch replied, "Yes. The note is F♯—no! it is not exactly that, it is a trifle above F♯, but not quite up to G." I immediately struck the left apex, again asking "how much higher is this than the other?" His answer was, "I is no higher; it is just the same." The former dulness, however, had largely disappeared.

I am happy to offer any gentleman, who may so desire, the privilege of testing the present resonance pitch in this same patient, any time before he leaves town; probably in early June or the last of May. Upon the basis of the above demonstrations I offer these propositions in summary of percussion:

1. Percussion product is a dual compound sound in which (*a*) percussion tone is developed by the thoracic bony wall, but modified by all contiguous solid tissues; and (*b*) percussion resonance is the sum of multiple resonances from the bronchial tubes.

2. Percussion tone alone is subject to variations of pitch; percussion resonance maintains a constant pitch, which is the same for all points of thoracic percussion.

3. Variations of percussion sound, commonly defined as normal, or vesicular percussion, exaggerated resonance,

dulness and flatness, are dependent very largely upon the *volume ratio* between percussion tone and percussion resonance, flatness being the entire absence of resonance. All variations caused by absolute change of pitch must come from percussion tone.

It affords me no little satisfaction to see how perfectly this duality of percussion sound harmonizes some apparently contradictory statements of eminent authorities regarding percussion pitch in emphysema, by showing that in this condition percussion tone may be high from the hardened costal wall, and percussion resonance apparently lowered from increase in volume.

Passing to the consideration of respiratory sounds we find them classified as "vesicular, exaggerated, rude, bronchial, and tracheal" breathing. Composition and origin of these sounds are not definitely considered, but pitch relations are generally accepted as follows:

1. Inspiratory pitch of vesicular respiration is low and undergoes a progressive rise, through rude and bronchial breathing, to the maximum limit in tracheal inspiration.

2. The expiratory pitch of normal breathing is not universally agreed upon, but all authorities state that expiratory pitch, in all other forms of respiration, is higher than that of the corresponding inspiration.

3. Tracheal breathing is described as presenting, in normal, an extreme form of bronchial breathing and the constant pitch ratio of all pathological respirations.

The distinction between composite and compound sounds, recognition of the multiple and independent origin of sonorous terms, and the restriction of exact and fixed significance to elements rather than sounds, are even more important in connection with auscultation than percussion.

With the admission that respiratory sounds are produced by the air-current as affected by the bronchial anatomy, two conditions are necessary for such production: 1. A definite amount of atmospheric momentum. 2. Some condition causing sudden condensation or rarefaction of the moving air.

While these conditions may be present in a bronchial lumen, any resulting sound, except from transient localized constriction, must be of such subordinate intensity as to become a vanishing factor in the final product.

At the bronchial bifurcations, however, we find conditions most favorable for the production of sonorous vibrations, from which, with the clinical demonstration that, during respiration, such vibrations are developed in the trachea and primary bronchi, both inspiration and expiration are seen to be, of necessity, sonorous sums representing series of terms analogous to that of percussion, and maintaining similarly proportionate pitch ratios. The conditions controlling production of composite sounds from multiple terms, and determining their elements, or fixing limitations of value, previously defined under percussion, can be predicated directly of the composite sounds of inspiration and expiration. Identical questions also, as to the possibilities of pitch modification from uniform pathological processes, are presented for determination.

It is not necessary, at present, to question the point in bronchial bifurcations, at which production of respiratory terms ceases, or to determine definite ratios of initial intensity, since any variations in these ratios must be similar throughout the series. During inspiration each bifurcation not only diminishes, by deflection and interference, the intensity of every previous term, but contributes two terms of higher and different pitch. Distinct pitch in a composite sound from such a series of terms clearly implies dominant intensity of end terms. For respiratory sounds, therefore, pitch becomes a question of a single large tube term with strong initial intensity as compared with multiple high-pitch terms of combined intensity. Whichever is assumed or proven clinically to control the pitch of inspiration, the demonstration, given under percussion resonance, is obviously applicable in this case, and the proof equally clear, that with high-pitch vesicular inspiration, derived from distal terms, progressive consolidation can only cause lowering of inspiratory pitch during the transition to rude, bronchial or tracheal breathing; while a low-pitch vesicular inspiration, from dominant intensity of a proximal term, will not be affected by similar consolidation, although elimination of distal terms, as for resonance, purifies the tone and intensifies its pitch-note. Hence, all pathological forms of respiration, caused by uniform pulmonary consolidation, must present an inspiration of the same or a lower pitch than that of vesicular inspiration.

Tracheal breathing, as a distinct form of respiration, represents essentially elimination of all other terms, and thus becomes a single, rather than composite sound, for inspiration at least. In view of the physical demonstration, and the innumerable and obtrusive musical illustrations, that pitch of sounds formed in tubes is in direct ratio to their size, it is difficult to understand how tracheal breathing ever came to be regarded as defining the superior respiratory pitch limits. Indeed, its position at the inferior pitch-limit would seem to be a physical necessity, so obvious, from its relative calibre, as to compel recognition. Application of a stethoscope to one's trachea certainly affords a clinical demonstration which is conclusive. Upon the basis, then, of similar ratios of intensity, between adjacent terms throughout the inspiratory series, it is proven that, whatever the pitch of vesicular inspiration, rise of inspiratory pitch under uniform advancing consolidation is impossible.

The introduction of momentum, as an ætiological factor in respiratory sounds, adds two contingencies, not associated with percussion, which must be indicated to include all the possibilities for general and uniform respiratory variations. Although the pitch of each respiratory term is fixed by the tube receiving the sonorous air, initial intensity of that term is dependent upon the atmospheric force (*vis viva*) and the amount of deflection as determined by the angle *of bronchial bifurcation*.[1] Reference to the anatomical relations of the bronchi shows that the effect of this motion and angle factor (m.a. for brevity) will not only be greater in the primary large tubes and low-pitch terms, since both m. and a. rapidly diminish centrifugally, but will be unequal in the different lobes. As a distinctly local condition it is foreign to the present paper, and further consideration is accordingly reserved for the discussion of definite values and special relations. I cannot pass the point, however, without noting the fact, that in this relation we find an explanation of differences in respiratory pitch under normal conditions. It thus renders exact measurements of these differences by pitch and quality, and consequently earlier recognition of pathological changes at the apices, perfectly possible. As a second contingency: It is clearly possible that, under a low pitch normal inspiration, with lobar consolidation sufficient to arrest largely or completely, atmospheric oscillations in the primary tube of an upper or middle lobe, the air-current of either normal or exaggerated compensatory inspiration, passing to the unaffected lobes, may develop a sonorous term, in crossing the mouth of the quiescent tube, of such intensity as to overpower the terms from the trachea or primary bronchi. But the dynamic value of all respiratory terms is greatest in the direction of the respiratory current, so that, under the assumed conditions, inspiratory modification from this cause would be greater in the unaffected than in the diseased lobe, and the pitch raised above normal therefore only when there is complete cessation of air current in the primary tube. That condition, however, changes what was an open into a closed tube, with consequent drop of its pitch-note an octave or more. Therefore, since the earlier changes in this lobe, under gradually developing consolidation, would illustrate one or the other previously demonstrated possibility, it is evident that, an inspiratory pitch higher than in normal breathing, from this cause must be a condition of temporal, as well as ana-

[1] $\frac{1}{2}$ mv ² sin. angle of deflection, as I remember it from college days, without vouching for its accuracy, (if anyone enjoys the pure science of this subject.)

tomical localization, and properly classed with local changes and compound sounds.

The mechanics of sound-production is no less evident for expiration than inspiration. From statements given above, it will be seen that the deflection of air-current, which initiates sonorous vibrations at any given bifurcation, is, for inspiration, from the angular junction and adjacent walls of the two distal tubes, while in expiration these vibrations are developed by collision of the two air-columns from the distal tubes as they enter the proximal tube. Thus, from every such sonorous centre, inspiration receives two terms, of different pitch, while expiration gains but one, and that of lower pitch than either corresponding inspiratory term. Therefore, since multiplication of these centres cannot modify this pitch-ratio between inspiratory and expiratory terms, expiration of higher pitch than corresponding inspiration, is impossible so long as every sonorous centre is represented in each respiratory sound. Relatively higher pitch expiration, in any form of breathing, thus necessitates: 1. Formation of the expiratory series by addition of distal terms to the inspiratory series: since elimination of proximal terms, by which the same effect might be produced, with low-pitch vesicular inspiration, is known not to occur: 2. That inspiration shall derive its pitch from distal terms, *i.e.*, be of high pitch. But, with vesicular inspiration of high pitch, by previous demonstration, consolidation causes progressive lowering of inspiratory pitch. Hence, low-pitch vesicular inspiration, rise of inspiratory pitch, with each modification, through rude and bronchial breathing, and relatively higher pitch expiration throughout the transition, being the pitch relations of respiratory sounds as given in all current works on diagnosis, *are, as associated conditions, physical impossibilities*. Again, with assumed high-pitch normal inspiration, expiration can acquire the requisite extra-distal terms only when the expiratory term from any given bifurcation is of greater intensity than the corresponding inspiratory terms. Omitting, for brevity, the steps of a somewhat lengthy demonstration, and risking its acceptance upon the accuracy of those already given, this conclusion may be stated: Although the absence of definite values for any of the factors of intensity, and the presence of some with fluctuating values, makes it impossible to give definite ratios of intensity, these factors, nevertheless, present such distinct relations as to render it a practical certainty that, under the conditions assumed, this ratio of intensity is in favor of the inspiratory terms.

That clinically, expiration is frequently of greater intensity than inspiration, does not prove, as is easily assumed on first thought, the error of this conclusion, any more than the presence, in such case, of some condition modifying intensity beyond those assumed. With the above conclusion accepted, the final contingency disappears, and leaves the demonstration complete, that relatively higher pitch expiration, as the result of uniform consolidation, is impossible, except as an accidental condition.

Present statements, it is distinctly understood, relate solely to respiratory sounds, as developed under physiological conditions, or from pathological processes causing only uniform pulmonary consolidation. Conditions associated with cavities of new formation; dual inspiratory and expiratory compound sounds: shifting bronchial contents: and isolated, accidental changes from any cause, are excluded, not arbitrarily, but in accordance with a classification of the subject required to permit accurate discussion, and are reserved for future consideration.

With this understanding I offer the following propositions, as defining the position I am prepared to defend:

1. Tracheal breathing presents a definite, and the only fixed standard available for measuring pitch in respiratory sounds.

2. It presents, in normal, the inferior pitch-limit of respiratory sounds and the universal pitch-ratio, for uniform respiratory variations, in an expiration of *lower* pitch than inspiration.

3. The superior limit of respiratory pitch is not constant. It is found variously in vesicular, beginning rude or exaggerated respiration.

4. Respiratory variations between these limits are rarely uniform, and undergo only lowering of pitch, while maintaining the universal pitch-relation between the respiratory sounds.

5. The pitch-note of any respiratory sound, when compared with the corresponding tracheal note, becomes indicative of the point at which the dominant term is developed, and after determination of the volumetric ratios of the bronchial tubes, may be an exact measure of pulmonary consolidation.

6. Respiratory sounds with relatively higher pitch expiration are exceedingly rare, clinically, (I have yet to see a well-marked case) and are the result of accidental causes. Therefore they cannot be predicated of any specific pathological condition.

Although not pertinent to the present discussion, the essential absence from this paper of anything suggesting practical results in clinical work, is sufficient excuse for indicating recognition of the fact, that in all matters medical the Q. E. D. which closes demonstration entails a clinical "cui bono?" and for offering this reply:

1. Whatever physical statements are made should be accurate. If current statements are in error they should be corrected or omitted.

2. Physical relations afford the only fixed and certain factor in physical diagnosis, and, therefore, cannot honestly be disregarded.

3. It is perfectly possible and practicable to make use of these relations in clinical work, and to know thoracic conditions so far as they are indicated by physical properties of the affected tissues. Objections upon the score of difficulty are unworthy scientific medicine, and impossible from the stand-point of experience: while imputations as to the probable accuracy of results are admissions of conscious weakness, for, of the two factors involved, physics and physician, the former cannot err.

4. As applied to instruction, the analytical method is productive of larger, more uniform, speedy, and accurate results than are otherwise possible: and, what is of far greater importance to students of medicine, it affords a practical and reliable guide for personal unaided study. This statement, evidently, must be offered and valued solely upon personal authority. It is based upon results obtained in private instruction during the past five years.

The foregoing demonstrations have been given only *in confirmation of facts previously determined by clinical investigation*, in order that acceptance of propositions, which present in definite form recognized facts, should not be requested upon personal authority. Their presentation as questions of pure science, with the promise of subsequent consideration of all contingent relations, justifies the request that they be so considered in criticism, and destroys every relation to claims of personal credit for their clinical determination, or philosophical investigation.

In conclusion, then, permit me to suggest that in their discussion the motto should be, *Nil nisi scientia*.

Memorizing Doses.—Dr. G. A. Wiggins gives the following rules: 1. The dose of all infusions is 1 to 2 ounces, except infusions of digitalis, which is 2 to 4 drachms. 2. All poisonous tinctures 5 to 20 minims, except tincture of aconite, which is 1 to 5. 3. All wines, from ½ to 3 fluid drachms, except wine of opium, which is 5 to 15 minims. 4. All poisonous solid extracts you can give ½ grain, except extract of calabar bean, which is $\frac{1}{12}$ to ¼ grain. 5. All dilute acids, from 5 to 20 minims, except dilute hydrocyanic acid, which is 2 to 8 minims. 6. All aquæ, from 1 to 2 ounces, except aqua laurocerasis and aqua ammonia, which are 10 to 30 minims. 7. All medicated syrups, you give 1 drachm. 8. All mixtures, from ½ to 1 fluid ounce. 9. All spirits, from ½ to 1 fluid drachm. 10. All essential oils, from 1 to 5 minims. —*Pharmaceutical Record.*

CLINICAL NOTES ON THE DIAGNOSIS AND TREATMENT OF PLEURISY.[1]

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For many years past I have felt convinced that a discussion by physicians of experience in regard to several points in the clinical history of pleurisy would be instructive.

To some general practitioners, I know, the diagnosis and treatment of pleurisy seems one of the most ordinary subjects of medicine. Indeed, I have heard one rather distinguished member of our profession affirm that, so far as pleurisy with effusion was concerned, he could invariably recognize it with certainty, and that the physical signs are always clear and distinct.

Such, I am free to say, is not my own belief. True it is that when the effusion is very large the signs are usually so well marked that anyone accustomed to see and treat many such patients will rarely be deceived. In the majority of such instances the flatness over an extensive area of the chest posteriorly, in the axillary region and up to the second or third intercostal space in front, combined with entire loss of respiratory sounds over the whole region involved, will unquestionably, where the symptoms of the case are corroborative, enable us to be absolutely affirmative in regard to the nature of the disease. On the other hand, whenever the effusion is moderate, we shall at times be in considerable doubt as to the presence of this fluid in the thoracic cavity, unless we have recourse to one or more punctures of the chest-wall with an exploratory trocar of a proper size.

This doubt may depend upon the variety of physical conditions incident to pleurisy with moderate effusion. In the first place, the chest-walls may be very thick, owing to heavy masses of muscular tissue or of subcutaneous fat. This condition frequently renders absolute certainty in the interpretation of percussion-sounds wellnigh impossible. We readily obtain dulness, or even flatness, but whether or not the dulness be due to the conditions just mentioned or to the enclosed pleuritic fluid we are at a loss to determine accurately. Of course, the dulness or flatness may be due to a combination of the two conditions, but how determine by percussion alone whether there be the single condition or the two conditions conjoined?

Under these circumstances we naturally and properly recur to other physical signs and auscultate the respiratory sounds. Frequently, in these instances, both I and my resident House Staff at St. Luke's Charity, and elsewhere, have found the respiratory vesicular breathing heard to the base of the lung—perhaps slightly modified at times as to its intensity and characteristics in a notable manner and degree, perhaps heard apparently in such a normal manner that we were at a loss precisely how to interpret what we found.

In some persons of stout or bulky frame the breath-sounds are heard feebly across the thick chest-walls. It may be that this condition explains the fact. Again, however, some patients breathe poorly. They do not expand their chest-walls with each effort of inspiration, when it is carried on in an ordinary manner; and even when we urge upon them to dilate their chest, or breathe deeper, it seems as if the breath-sounds come to our ears feebly, this especially being true in regard to the breath-sounds as heard at the base of the lungs. Occasionally, we are suspicious in such cases that there may be some old pleuritic adhesions which obscure our hearing. And not only is this our suspicion when facts in the preceding history of the patient appear to render this suspicion probable, but even in those cases where we have only a conjecture as to what may have occurred. For example, we do undoubtedly find, post mortem, in numerous cases and of all kinds, old pleuritic adhesions more or less extensive.

Leaving out those cases where chronic lung changes of tubercular or fibroid nature appear to be connected with the pleuritic thickening, there are some which I am convinced are connected with badly determined previous conditions, which have been present during life, and which have never been noted or well understood. I am inclined now to believe that some of these conditions were of the nature of obscure forms of rheumatic or gouty dyscrasia, affecting the pleura in an insidious manner, just as they do fibrous or other serous tissues of the economy. Such pleuritic adhesions or thickening may not be in any sense a sudden growth or development, they may come on gradually, without occasioning any very manifest symptoms, either to physician or patient, and yet they may be none the less a reality, and in just such cases as I have referred to, they may be actually present and obscure an otherwise clear diagnosis.

In some instances the breath sounds may be heard to the base of the lung posteriorly, and their intensity be but slightly diminished. With these auscultatory signs we may find more or less numerous moist râles, superficial in character, rather fine or coarse in quality, and heard in one or both times of the respiration. What is the import or significance of such râles? At times we cannot understand how they should exist if a moderate effusion is present; and particularly is this true if our faith in the descriptions of pleurisy, as written in our classical text-books, be our implicit guide as to what our diagnosis should be. Yet, that such râles are often found when two or more pints of serous fluid fills the pleural cavity I have more than once been able to demonstrate in the most convincing manner by withdrawing such an amount of fluid by means of the aspirator.

These râles were stated by the late Dr. Leaming to be of the nature of pleuritic râles, and many of us remember with how much talent and ingenuity he endeavored to prove the correctness of his assumption. I have never been convinced that Dr. Leaming's ideas were correct, at least, in anything like the general manner he wished so earnestly to have us accept them. The very cogent reasons which made me doubt Dr. Leaming's affirmation were, first, because it seems to me that the two layers of the pleura must usually be kept so far asunder by the amount of effusion present that it was almost impossible to believe that there could be any friction between adjacent pleural surfaces and thus produce the pleural râles, or friction-sounds. Of course, I am free to admit that not infrequently there are probably some fibrous septa between the adjacent layers of the pleura at certain points which do not interfere notably with the accumulation of a tolerably abundant pleuritic effusion, and yet occasion adventitious sounds in the pleura which are most confusing when the question of accurate physical diagnosis is under consideration. I am, however, disposed to believe in more numerous cases that the true explanation of these so-called pleuritic râles of Leaming lies in the fact of the congestive condition of the pulmonary structure underlying the visceral pleura. During normal respiration in many chests the superficial layers of the congested lung are sufficiently expanded to produce a comparatively large number, more or less widely disseminated, of moist râles of different sizes, usually carried to the ear as if they were superficial rather than deep-seated. We must admit, however, that such sounds are frequently confusing, and we shall be prone to acknowledge, unless repeated experience has proven to us how deceptive they are, that they are incompatible with the presence of a moderately abundant pleuritic effusion.

Those instances in which I have made more than one mistake of diagnosis in an evident manner, are the cases of pneumonia met with intercurrently with a severe attack of grippe. In some of these there was markedly diminished breath-sounds, dulness over an extensive area of the lung posteriorly, and disseminated fine moist râles at times, no bronchial breathing; diminished vocal fremitus and thoracic vibrations; slight bronchial expectoration, and that too of a negative character. I have repeatedly tapped such cases and found not a drop of pleuritic fluid. I have afterward been able sometimes to

[1] Read before the New York Academy of Medicine, March 2, 1893

be convinced as to the precise nature of the morbid lesion I had to deal with, without causing my patient the slight, but useless, distress of a puncture or punctures, which would result negatively.

In pleurisy with a notable degree of effusion, we usually expect both vocal fremitus and thoracic vibrations to be diminished very considerably; and yet such is not invariably the case. I see cases quite frequently in which neither of these phenomena are present, and, on the contrary, the vocal sounds, as well as the vocal fremitus are, so far as I could determine, almost normal in quality, or *timbre*, as well as intensity. How shall we explain such facts, so much opposed to the prevailing belief and to the descriptions as given by many classical authorities? I presume that it must frequently depend upon the unequal amount of tension in different cases, even with an amount of fluid contained in the pleural cavity approximately similar. The tension of the chest-walls may depend upon the less or greater mobility of the bony framework of the thorax, the greater or less power and action of the exterior muscles, the possibly greater or less capacity of the pleural cavity itself. In other cases, and notably where the pleural effusion contains an increased amount of fibrin, or where pus-cells are more or less abundant, the density and nature of the intra-pleural fluid will no doubt influence materially the signs to which I have referred.

I would add in addition to what I have already said that the modification of the breath-sounds, either in regard to the more or less well marked change, which we term "œgophony," or the soft blowing sound so characteristic at times of compressed lung, caused by effusion in the pleura, rather than of the solidified condition which is found in pneumonic infiltration, is variable in nature and amount.

In regard to the nature of the effusion in pleurisy, I would direct attention to the relatively great infrequency of blood in notable quantity contained in what are proven to be, later on, cases of acute pleuritis without underlying physical conditions which manifestly account for it, such as tuberculosis or carcinoma. Still, among a large number of cases very closely observed I can recall distinctly one instance in which the sanguinolent nature of the effusion seemingly had nothing to do with any constitutional condition which became evident at the time the effusion was present, or subsequently. In this case the patient recovered completely after two tappings, and has never had a return of his disease, although many years have elapsed since I took care of him. Of course, as is familiarly known, effusion of serum mingled largely with blood means, within the pleura, very often tubercular or carcinomatous infiltration. In the one, as in the other, disease a long time may elapse before the diagnosis may become assured; but by careful watching and research the correct diagnosis can usually be made.

Of course, it is a relatively simple matter when the diagnosis is clearly established to point out the probable prognosis and lay out a rational treatment of such cases. I desire earnestly to urge upon my listeners, in these doubtful cases, to have frequent microscopic examinations made of both sputa (if there be any) and chest effusion.

Only a few weeks ago a young man left my care in a private room at St. Luke's to go to the sand-hills of Georgia, because we found definitely, and although in some particulars his condition seemed much improved, unquestionable evidence in his sputa of the probable tubercular nature of a double pleurisy from which he had been suffering for a long time. When this young fellow came under my professional charge he had on one side a relatively pure serous effusion, moderate in amount; but on the other, the effusion contained a considerable quantity of blood. Although for many weeks, and despite the most careful repeated research, no distinct proof could be found of tubercular disease, at the end of this time it came to light. In this case, as in others formerly observed, the nutrition, temperature, and general condition of the patient had notably improved under judicious care and management. When, however, tubercle bacilli were discovered, I concluded, and I believe properly, that the hospital was no longer a suitable place for such an one, and urged strongly the departure of the patient for the South, where sunshine and temperate air could be more largely enjoyed during our winter and early spring months. The result attained has apparently answered all my just expectations, for within a brief period my patient is like a new being, and I am convinced that with good surroundings and time his tubercular condition will become arrested or non-active.

Localized pain in the side as a symptom of pleurisy, especially in its first stage and before the effusion has become evident, is a familiar one to all practitioners of medicine. Usually this localized pain in the axillary region, or elsewhere in the chest, is accompanied by friction-sounds which are easily detected by auscultation. There are numerous instances, however, in which the localized pain is indeed the only local symptom which we can discover. This pain is not increased by pressure, and not invariably by respiration or cough. Accompanying it there is frequently a dry, irritative, obstinate cough, unaccompanied by any rise of temperature. The throat symptoms are slight, or negative, and, indeed, we are unable to find anything satisfactorily explanatory of the cough. Finally, after many weeks of useless medication and at the end of our resources, we begin to be fearful lest there be an underlying tubercular condition which is the source of local irritation.

If, in these instances, there be any great relative difference, as is sometimes true, between the respiratory sounds we are more anxious still in regard to the ultimate outcome of the case, and propose, it may be, a complete change of climate. I am convinced, to-day, that many such patients are suffering merely from a local inflammation or thickening of the pleura, and that this condition is not, as is frequently stated, the immediate result of "catching cold" or atmospheric changes, but rather a localized expression of a rheumatic or gouty dyscrasia, inherited or acquired.

Frequently there are other very evident rheumatic conditions which are present at the time of the irregular pleuritic attack, or there is a history of one or more previous attacks of acute, or subacute rheumatism. In other instances there is little or nothing to guide one, except the frequent recurrence of these attacks, the absence of definite symptoms pointing to tuberculosis, and the results obtained by anti-rheumatic treatment. I have even now present to my mind a lady patient of mine, who has been a source of considerable anxiety to myself and to all the members of her immediate family on account of just such attacks as I have referred to, but fortunately, after very careful and long-continued observations, I have concluded that her recurrent attacks of localized pain and obstinate cough are due to a localized rheumatic pleurisy. In this patient I am also confident that over-fatigue in household duties, which occasions a general depression of her vital forces, and particularly lessens the muscular energy of her cardiac contractions, is the efficient cause of the attacks of rheumatic pleurisy, rather than the so-called colds to which she attributes all her ailments. In this instance the attacks of pleurisy are not accompanied with effusion, as a rule, and when the effusion is present it is very slight in amount, at least so far as the closest physical investigation will enable me to determine. It is sometimes extremely difficult to decide by any commemorative signs or physical exploration, other than the use of the aspirating needle, whether or not the serous effusion has become sero-purulent or purulent. In some instances the temperature curve is about the only probable diagnostic sign. Whenever we notice, after a week or more of the duration of a pleurisy with effusion, and when tubercular disease may be probably eliminated, that the temperature curve shows intermittent high elevations and equally low falls, at somewhat irregular intervals, accompanied or not by rigors and more or less profuse sweating, we must be on our guard against the presence of pus in the pleural cavity.

This statement is still more important if the pleurisy be a secondary one, or a complication of some acute febrile disorder, as typhoid fever, pneumonia, or the exanthemata. If the pleurisy be a complication of chronic cardiac or renal disease, suppuration occurs, but less frequently.

Localized œdema over the side of the chest affected with an empyema which has occurred in an acute or subacute manner is a frequent, but not invariable sign. It may be slight or moderate in amount. It may not be present until the empyema has existed for many days. Of course, when it is present, and particularly if it be adjoined to recurrent chilly feelings and rapid rises and falls in the temperature curve, it means almost invariably in the premises a suppurative effusion in the pleural cavity. In all cases in which there is an obstinate dry cough, or one with slight frothy expectoration in pleurisy, which we are inclined to attribute to this disease, we should not be satisfied without making a very thorough examination of the throat. A relaxed uvula, a subacute pharyngitis and laryngitis with more or less tracheal irritation quite frequently are really the cause of the rebellious cough, and judicious topical applications will soon clear up the situation materially by curing a cough which already gave distress and anxiety.

Incidentally, I may be permitted to remark that nothing disturbs me more than to hear occasionally of the banishment of a patient to Colorado, the Adirondacks, or the sand-hills of Georgia, for cough which seems to forbode incipient phthisis, when this symptom depends solely upon an undiscovered irritation proceeding from the upper air-tract and which could be readily and quickly relieved by local treatment.

In this connection I would also remark that in latter years I am of the opinion that there is too great a tendency to the belief that acute pleurisy means frequently an underlying tubercular cause, and that the pleurisy is merely a secondary effect of the tubercular deposit in the outer layer of the lung, or within the pleura. Of course, we see such cases, but they are met with habitually in hospitals and in persons who have already a depraved constitution and who have given evidences of a tubercular tendency. But to believe that in a previously healthy individual an attack of acute pleurisy will probably be followed by pulmonary phthisis in the near or distant future, is to go, in my judgment, very wide of the mark. In all published records of this kind it is well to know and bear in mind that hospital statistics mean one thing and the statistics obtained from close observation of private patients quite another. I cannot bring this truth to your minds too forcibly, because it is far too often lost sight of and helps vitiate and render wholly inaccurate many reports of good observers—when these reports are translated to mean what occurs really in all cases of the kind referred to.

The question of the treatment of pleurisy with effusion is always of interest from many points of view. In the first place, and even when moderate in amount, it may and often does produce quite marked functional disturbances, some of which, as dyspnœa and cyanosis, may be of sufficient importance to inspire solicitude. These symptoms may appear earlier and be more pronounced in weak patients, or those already suffering from general anæmia or feebly acting hearts. Even when a moderate effusion causes no special anxiety at the time, on account of the functional disturbances of different internal organs occasioned by its presence, yet it is always a menace to life, in my judgment, because it may rapidly increase in quantity and become excessive. Of course, the likelihood of this sudden increase, other things being equal, may depend upon one or more of several factors, such as constitutional tendency or individual condition at the time of the attack, surroundings, treatment, etc. If an effusion has lasted without appreciable diminution for more than two weeks, it is unlikely to disappear under ordinary medicinal methods of treatment, without leaving in its wake a condition of more or less compressed lung and thickened pleura, which will only disappear little by little and in quite a long period of time, even under the best of circumstances. Moreover, the effusion itself may remain stationary so far as quantity is concerned, and besides is liable to change spontaneously from being a simple serous effusion to one containing numerous lymph flocculi or pus cells; in other words, into a sero purulent effusion.

I have given a fair trial during my hospital services in past years to the different methods of medicinal treatment which have been in vogue temporarily, and for which were claimed by their too enthusiastic promoters more than a due amount of credit in making an effusion disappear rapidly. As a result of these trials, after carrying out other rational indications during a few days, if the effusion is moderate, not to say abundant, I believe that it is far wiser to withdraw the fluid by means of aspiration than to trust hopefully to the curative influence of uncertain medication. In those instances, indeed, in which any special medication has been apparently of great service, usually to the thoughtful physician it will be discovered that the true cause of the results obtained resides mainly in the fact that a dyscrasic condition, or organic change of a special and important organ—though it may be far removed—has not been ignored. Of course, if a patient who has pleurisy has been habitually a sufferer from hepatic engorgement, repeated small doses of calomel, podophyllin, or ipecac produce a purgative and diuretic effect, which may diminish the pleural effusion in a very notable degree, by allowing the absorbents in the pleural layers to take up its serous effusion in a rapid manner. In a similar manner, and as has been already noted, if the rheumatic or gouty condition be the efficient cause of the pleurisy in the first instance, as in all inflammatory states of like origin, whether it be in the joints, or on the pericardium, the endocardium, or the fibrous insertions or sheaths of muscles, or tendons—salicylate of soda and colchicum, in some form or combination, will be rapidly and unquestionably very effective as to their remedial action. Finally, if a weak heart renders passive congestion more or less imminent in every internal organ—lungs, liver, kidney, spleen—why should the pleura when inflamed accidentally not be wonderfully influenced by cardiac stimulation with strophanthus and digitalis? Some one of my hearers may be inclined in this place to criticise the writer and remark that these are but trite aphorisms with which all good practitioners are familiar and upon which they invariably base their conduct. It may be often true, and among those probably who may honor me by discussing this paper, I have little doubt that this matter, as well as all other points upon which I have briefly touched, is to them as it were a "twice-told tale," to many of my colleagues I must believe, judging by my frequent observations, they are truths more "honored in the breach than the observance." Whenever a notable amount of pleuritic effusion is present I now hold that it is almost always good practice to remove it by aspiration, and that, too, within a very few days of its formation. True it may and does form again once or twice, but the reformation is of a less quantity of fluid, and one or two aspirations will very often get rid of an amount of effusion in a perfectly safe and almost painless manner that requires weeks to remove by the very best medicinal treatment with which we are at present familiar. If aspiration did any real harm in any but the smallest percentage of cases, I could understand how it is that the medical profession still delay its use for several weeks, or until ordinary medicinal methods have been found ineffective. So far as my experience goes, and it is now, I believe, a large one, I have very rarely seen aspiration of a serous effusion do any harm that could be fairly attributed to it when it is performed with ordinary care and skill. Of course, the aspirating needle employed should be rendered absolutely aseptic.

In addition, the skin over the region where the puncture is made must be carefully washed with bichloride so-

lution, 1 to 1,000. The needle may be thrust directly into the pleural cavity, or a small incision of the skin may be made in advance. A hypodermic of cocaine, four per cent. solution, is preferably employed before the puncture or incision, in extremely nervous patients, as it abolishes the slight pain connected with the operation, and to a certain degree quiets mental apprehension. The patient should be in a lateral inclining position with the side to be operated on turned upward, and well supported by a firm pillow. I give these minor details, because apparently they are occasionally lost sight of, despite their supposed familiarity to all. It is wise in specially weak individuals to administer an ounce of whiskey and three to five drops of tincture of strophanthus fifteen minutes before the operation. It is unwise to withdraw the entire quantity of a very large effusion at one tapping, in any case. In moderate effusion the entire quantiy may be safely withdrawn at one operation, provided the lung is not notably compressed and the effusion has not been present in the pleural cavity during many weeks. More than once, and even in very large effusions, I am of the opinion a withdrawal of a small quantity of fluid has been of very great value, in that it has given the absorbents a chance to take up the fluid rapidly and this was clearly shown by its subsequent speedy disappearance. The pressure on the vessels, or the tension of their walls from within, has, previously to the thoracentesis, prevented this useful absorption of fluid. My impression is that we are indebted originally to Dr. A. A. Smith, of this city, for the observation of the fact to which I have referred, and which clinically I believe is important to recognize.

One of the great dangers to which a patient is exposed from whose chest a large quantity of effusion has been rapidly or at one operation removed, is unquestionably the sudden appearance of œdema of one or both lungs, combined with rapid congestion of the compressed lung. Such patients will sometimes, within an hour or more after the operation is terminated, begin expectorating an abundant amount of frothy, serous sputa, which are combined with a constant irritative cough. The latter symptoms often cause very great prostration, and sometimes death is thus brought about in a very sudden manner. Upon auscultation the lung bases, and sometimes the entire pulmonary structure on both sides, posteriorly, is filled with a large number of moist râles indicative of the condition occasioning it. Dry cups to the back and alcoholic stimulation, together with frequently repeated doses of nitroglycerine and atropine by the mouth, or hypodermically, according to the urgency of the symptoms, is now, I believe, the admitted best manner of treating this accident.

Does aspiration increase the local inflammation at the seat of puncture? I do not believe it does, as there is no evidence in the general signs or local symptoms to justify this belief in the great majority of cases. Does the fluid reaccumulate in the pleural cavity when it is withdrawn too soon in acute cases? In many cases it does, but it is usually in diminished quantity, especially if the chest-wall of the affected side be firmly strapped immediately after thoracentesis. Sometimes the fluid in effusions that have lasted only a week or two, when once removed, does not recur again, or, if it does, it is merely a return in very much diminished quantity, which occasions no appreciable disturbance of functions and will sooner or later completely disappear. This statement is not, I believe, in accord with much that is authoritatively written. Does a serous effusion frequently become seropurulent or purulent after one or more operations of thoracentesis? Undoubtedly it does, but when it does, I am inclined to believe that it depends upon one of two factors: either the needle or skin is dirty or non-aseptic, or else there is a focus from which the pus originates under the dependence of some dyscrasic condition, as a typhoid ulcer, or from an unrecognized suppurative condition in or about the appendix, etc. Of course, at times the suppuration may originate in the pleural cavity itself and without our ability to discover any different locality as the starting-point of the purulent process. It will be noted, therefore, that I do not admit at all, as is often done, the probability nowadays of a purulent change in a serous effusion caused by the thoracentesis. This lamentable occurrence no doubt frequently occurred in former years at a time when aseptic surgery was an ignored or unknown art, but this propagated view should in my judgment be relegated to the past and in no sense be the guide of our present operative treatment of pleurisy with effusion.

Much as I believe in the manifest advantages of thoracentesis in all effusions in which the fluid remains serous or only contains a small quantity of pus, I am decidedly of the opinion that when the effusion becomes markedly purulent—and this statement is practically true with few exceptions among adults—recourse should be had to excision of a rib on the affected side, the introduction of a drainage-tube, and proper antiseptic dressings at the time of, and subsequent to, the operation. In these cases all washing out of the pleural cavity should be avoided, unless the putridity of the purulent exudation or the intermittent high rises of temperature indicate clearly the necessity of such irrigation.

In concluding this desultory paper, I beg leave to read a short *résumé* of cases closely observed by my late House Physician, Dr. W. K. Rogers, Jr., which he has kindly given me. While many of his statements are in accord with my own views, to some of them I should take partial exception on account of my own and, as I believe, larger experience. As a record of his and of some of our combined work, the *résumé* has decided value as an addition to this paper.

I would also state that I have requested Dr. Dade, the present Resident Physician of St. Luke's Hospital, to bring here with him what is known as Allen's pump, which we now use at St. Luke's Hospital for aspirating purposes in preference to the ordinary Dieulafoy's aspirator, mainly because it is simple in construction and withdraws the fluid more easily and rapidly than does the aspirator. I would add that the pump is relatively cheap and may be adapted to many different purposes, such as irrigation of the stomach, the bladder, etc. I would not mention this pump unless I thought it were an addition to our surgical armamentarium and not adopted as yet practically by the profession in general.

Since writing my paper, Dr. Gibson, formerly House Surgeon at St. Luke's Hospital, and who has lately returned from Vienna, has shown me a form of aspirator manufactured by Leiter, which seems to me to have special advantages. These latter, with your kind permission, will be shown by Dr. Gibson after Dr. Dade has demonstrated the use of the Allen pump.

"St. Luke's Hospital, New York, December 31, 1892.

"Dear Dr. Robinson: The following *résumé* of thoracentesis cases, made pursuant to your request, is taken from twelve cases occurring during my house-service, twenty-one cases seen by me in the services of others at this hospital, and nine which I had the opportunity of watching or treating elsewhere.

"I have avoided individual reference to cases for the sake of brevity, and have not included twenty cases of empyema and two of pyopneumothorax, although exploratory puncture was made in these. Neither are included cases where the pleura was explored without finding fluid. But one of these should be mentioned; a case of pneumonia—chest explored, no fluid found—subsequently a localized empyema developed at the point of puncture with corresponding abscess of lung and chest-wall, two small hepatic abscesses, and pyæmia.

"One case of hydrothorax, after four aspirations, developed empyema, and another, after three, empyema, subdiaphragmatic and renal abscesses. These two are of the forty-two cases mentioned, and this comprises the list of casualties which I have had the opportunity of noting in this connection.

"In no case was a rise of temperature noted that might not have been attributed to some other cause.

"Repetition of the operation upon the same cavity, in reasonably recent cases—two to three weeks' standing—of inflammatory origin, was not required when all the fluid, or nearly all, could be removed at once, nor in some that had probably existed for from five to thirteen weeks. In four old cases it was repeated from two to six times, usually some accessory treatment being meanwhile resorted to. In two of these the fluid did not disappear entirely while under observation, neither did it entirely reaccumulate.

"In five cases where the effusion was either dropsical, or in connection with new growths, one was permanently relieved by two tappings, the others not, although one case was aspirated twelve times.

"In only one case (six or more were examined for this purpose) were tubercle bacilli found by ordinary means, and necropsy showed in this instance extensive tubercular changes in the pleura. Three were known to have complicated pulmonary tuberculosis.

"In only two cases out of the list, so far as I can find, was evacuation of fluid in the chest omitted; the amount was small, and they recovered. In ten, so far as ascertainable, from one to two weeks elapsed, under other treatment, without notable diminution of fluid, which was finally withdrawn. None was definitely shown to be of rheumatic connection.

"In eight the signs seem to have been equivocal. In two of these only increased frequency of respiration, and in one dyspnœa, with altered resonance rather than dulness, and a slightly distant character of voice and breath-sounds, pointed to the nature of the trouble. In four there were distinct crepitant or creaking râles, and in one the crepitation was distinctly plastic in character, and very abundant, but in this and two of those just previously mentioned the flatness and change of voice were characteristic.

"Very respectfully,
"W. K. Rogers, Jr.,
"*House Physician.*"

THE TREATMENT OF ASIATIC CHOLERA.

Based on Observations made at Swinburne Island, during September and October, 1892.

By FRANK ABBOTT, Jr., M.D.,

Deputy Health Officer and Assistant Bacteriologist to the Health Officer of the Port of New York; Instructor in Bacteriology in the Loomis Laboratory, University Medical College; Director of the Laboratory of Histology and Pathology New York College of Dentistry; Curator and Pathologist New York Infant Asylum, etc.

The rational treatment of Asiatic cholera is derived from our actual knowledge of the disease; being as it is a localized, infective process, our efforts should be directed to destroying the vitality of the bacteria, if possible, in their place of localization, and to neutralizing the effects of the absorption of the poisonous substances created in the intestinal tract by the comma bacilli which produce the disease. The first indication is filled by flooding the intestines with solutions of substances capable of stopping the growth or destroying the life of the pathogenic bacteria of the disease. Acid solutions, as is well known by all experimenters, have a more or less germicidal action upon the comma bacilli. Abundant rectal injections, or enteroclysis, as Cantani has called it, cannot only cleanse the different portions of the large intestine, but actually pass through the valve of Bauhin into the small intestine, reaching in some instances the stomach, as can be proved by chemical analysis of the contents of that organ after enteroclysis. It happens in some cases, although the solution penetrates and fills the large intestine, the last portion of the ileum is so flexed upon the cæcum that the injection will not pass into the small intestine, but a careful and well-directed massage of the right iliac fossa will soon overcome the obstruction. This has in many instances been put forward as an objection to the practice of enteroclysis, but it has been demonstrated clinically that the ileo-cæcal valve is readily permeable. A two per cent. solution of tannic acid stops the growth of the comma bacilli and destroys its vitality in from one to three hours. Enteroclysms of this solution, one-half gallon at a time at 40° C., according to Cantani, 42° C., according to Byron (104 to 106° F.), not only act as an intestinal disinfectant, but by their temperature counteract the tendency to collapse, which is one of the characteristics of this disease. The intestinal injections should be begun in all cases, without exception, as soon as the first diarrhœic symptoms appear. Any case of diarrhœa in a cholera-infected locality should be considered as suspicious and treated accordingly. The solution of tannic acid is prepared by dissolving two ounces of tannin in one gallon of sterilized water, then the solution is heated to the proper degree of warmth as above given, and injected into the colon by means of a flexible catheter not less than two feet in length. The pressure should be regulated with a fountain syringe at the height of about four or five feet. In some instances the injection does not seem to penetrate into the colon, but by allowing the solution to first fill the rectum and advancing the catheter gradually, as the intestines fill, the operation is performed without difficulty. The volume of the injection should be measured by the age and size of the patient; for children of two years of age, about a pint of the solution, injected every two hours, or more frequently, according to the indications of each case, is sufficient; while in the adult the dose may vary from one quart to one gallon, repeated as often as symptoms demand. In some instances, when vomiting has not begun, calomel in doses of ten grains, repeated every hour until thirty grains have been taken, may prove of great advantage, not as a specific but for its action as a deterser of the intestines.

In cases where the stomach rebels against any medication it is useless to lose time trying to treat the disease by the administration of medicaments *per orem*. Another fact that should not be forgotten, whether the case is slight or grave, is the disinfection of the external integuments; all patients should be thoroughly washed in an immersion hot bath and their skin cleansed with slightly acid solutions. They should be put in a warm bed, and stimulants, such as hot coffee or hot tea with brandy, administered. In many instances this treatment will check the progress of the disease, as has been proven in cases in which the coma bacillus has been found in the dejections of patients who never reached the stage of collapse, or the second stage of the disease. When the diarrhœa is profuse and persistent, and the first signs of collapse appear, hypodermic injections of alkaline solutions should be resorted to without a moment's delay. These not only replace the water lost from the blood, but by increasing the volume of fluid contained in the body help to dilute and eliminate the ptomaïnes produced by the comma bacilli, which otherwise would be retained in the system. The solution for hypodermic injections, or hypodermoclysis as it is generally known, is prepared by dissolving seven parts of sodium chloride in one thousand parts of sterilized water (sodium chloride ʒ ij., water ℥ xxxij.) with or without the addition, according to the necessity of the case for a stimulant, of ten parts of brandy or six parts of pure alcohol, and heating the whole to 37° C. (98.4° F.). The operation is performed by means of an ordinary bulb or fountain syringe, and a small-calibre aspirating needle inserted, preferably, in the latero-thoracic region. The amount injected each time varies according to the case. In an adult a quart is not an excessive amount, and this may be repeated as often as required until the pulse, which should be the guide to the physician in these cases, becomes strong and full. In most cases the absorption of the injected fluid indicates the prognosis. A quart of fluid is generally absorbed by an adult in about thirty minutes. If the absorption does not take place the probability is that the vitality of the patient is so low that all interference is useless. Hypodermoclysis and entero-

clysis must be continued until the temperature of the body and the action of the heart show an improvement in the case. Hot-air baths are most beneficial to maintain the temperature of the body. If the symptoms of asphyxia are persistent, notwithstanding the above treatment, inhalations of oxygen under certain circumstances have been of great benefit in cases which seemed almost hopeless. Cramps, which are the most distressing symptom during the attack in its advanced stages, are relieved by the combined action of the hot air baths and massage.

Opium and all its derivatives, as well as hydrate of chloral, bromides, etc., should be avoided, as the only result of the use of such therapeutic agents is to depress the action of the heart and the vitality of the patient. From our actual knowledge of the disease, which is only the localization of a pathogenic germ in the intestinal tract, with subsequent absorption of a poison which produces an action very similar to that of muscarine, the treatment is evident, and it will be found that that given above is the best known to science to-day. The contagion having taken place, the germs being in the intestinal tract, the ptomaïnes having been absorbed into the blood, our effort should be to remove the poison from the blood, and to put a stop to the activity of the germ in the intestinal tract; in other words, wash out the blood, wash out the intestines.

During the third, or reactionary stage, which differs according to the severity of the attack, the nutrition of the patient should be the principal aim of the physician; to re-establish the impaired action of the kidneys and build up the system gradually, a careful diet should be given, avoiding everything that requires much effort in the way of digestion, thus protecting the alimentary tract from irritation. Seltzer-water with milk, carbonated beverages, champagne in moderate doses, maltine with cod-liver oil in weak children, maltine with peptones in older persons, will be found beneficial. The latter is the best substitute for a combined meat and cereal diet, and is easily assimilated.

The convalescence after cholera is long and tedious, and fraught with much danger to the patient on account of the lesions left in the intestinal tract. Notwithstanding the apparent good condition of the patients after leaving their beds they are very debilitated, and the least excess or error in diet may give rise to serious complications. Duodenal digestion is always very poor in these cases, and foods which require little digestion in the small intestine should be adhered to for some time, and here maltine preparations have proved exceedingly useful. As to the prophylactic treatment, only brief mention is necessary. Isolation of the patients and thorough disinfection of their clothes and dejections are the best means of avoiding the disease. It should not be overlooked that water for drinking purposes, and all foods, should be recently boiled or cooked before being used, and it is highly important that the physician sees that in his families these precautions are observed. All cases of indigestion should be promptly treated, the system of delicate persons built up as far as possible, and any errors of diet corrected. Delicate children with poor digestion and weak assimilative powers derive great benefit and are rapidly built up by the free use of maltine with cod-liver oil.

The results of the above treatment were practically demonstrated in the last imported epidemic of Asiatic cholera at the quarantine station. In most of the steamers which brought the cholera patients over the death-rate on board reached over ninety per cent. of the total number of sick, while at Swinburne Island the percentage of death was reduced to twenty per cent., and it is believed that treatment carried out as above, with careful attention to detail, and begun early enough in the disease, may reduce the mortality still lower.

49 West Fifty-seventh Street.

Ascites is relieved by Dr. Sasaki with cream of tartar given in daily dose ranging from two drachms to an ounce.

A REVIEW OF THE PATHOLOGY OF PUERPERAL ECLAMPSIA.[1]

By WILLIAM MOSER, M.D.,

Assistant Pathologist to St. Catharine's Hospital, Brooklyn, N. Y.

One of the principal reasons why the morbid anatomy of eclampsia, and the etiological deductions therefrom, have given rise to so much discussion, is because the post-mortem appearances differ in almost every cadaver. We are endeavoring to find the pathology of a disease characterized clinically by convulsions and coma occurring in pregnant women. But why should this be a distinct disease? Its protean pathological manifestations and certain clinical symptoms lead me to believe that those observers who have found a bacillus (Doleris, Blanc, Favre), and others who are looking for the ptomaïne, are a little premature. I am inclined to believe, in reviewing its pathology, that there are several etiological factors concerned in its causation; that it is not a distinct disease; that it has no characteristic symptomatology or pathology. The relationship between eclampsia and uræmia, to which attention had long ago been drawn by Frerichs and Braun, are theories which leave too much to be desired to allow of their stability. To those objections already offered by Seyfert we may add that recent chemical investigations of the blood have, in nearly all instances, given negative results (J. Veit).

The ingenious theory of Traube Rosenstein was not confirmed by post mortem examinations. In fourteen autopsies which I saw (during my studies in Berlin) œdema of the brain was conspicuous by its absence. The same may be said of dilatation of the ureter, to which Halbertsma and Löhlein attributed such importance in the causation of the eclamptic attacks. In only one case did I see this condition. It was the right ureter (and I might mention, *en passant*, that the right is more frequently affected than the left) which was dilated to the size of a man's thumb.

The theory of Schröder and others, that spasm of the cerebral vessels, with consequent anæmia of the brain, might explain the symptomatology of eclampsia, is a theory which it is difficult to confirm or refute. Stumpf found in all his cases acetone and sugar in the urine.

He is of the opinion that possibly acetone is responsible for the condition. The repulsive odor of the breath of eclamptics reminds one of acetone as it does of diabetes. How the toxic element gains entrance into the system he is unable to say, but advances the theory that it may be derived from the child. A case occurring in Gusserow's clinic, in which the woman had her first attack a few days after delivery, weakens such a theory. In short, there has been much theorizing on this subject.

What are the lesions found at autopsies in eclampsia? The most constant pathological lesion is the presence of fat in the pulmonary circulation. Virchow first drew attention to the presence of fat emboli in the lungs and kidneys. Fat is found in great quantity, at times so abundant as to be recognized microscopically, or by immersing the knife with which the lung has been incised in water, when fat globules are seen floating on the surface. Virchow regards these emboli, which occur in such quantities, to so interfere with the pulmonary circulation as to cause the œdema, which is such a frequent accompaniment. Most pathologists are agreed that a few fat emboli in the pulmonary circulation will not produce œdema of the lungs. As a matter of fact, fat emboli occur in the lungs in puerperal women who die from other causes than eclampsia. Dr. O. Israel, in the Berlin Pathological Institute, demonstrated this to me in the case of a puerperal woman who died of phthisis. I do not intend to bring this to the notice of the profession as anything new, as I believe that Wagner pointed this out some years ago. But these emboli are very few in number as compared to what one can find in the lungs of eclamptics. In some cases under observation in Virchow's laborarory

[1] Read before the American Association of Physicians, Berlin.

the characteristic "sausage-shaped plugs" of fat filling the lumen of the vessels could be easily demonstrated under the microscope. In no case were they absent. The examination of the kidneys for fat emboli is, I must confess, a difficult and unsatisfactory problem to solve. In a number of sections made, which were taken from different cases, it was impossible to say whether the fat was in the lumen of the vessel (embolus) or outside. In the examination of the lungs, however, we ought to have no doubt on this point. Now, admitting that these emboli do occur, what relation do they bear to the disease? We agree with Virchow that they are the effect produced by the convulsions. To the same cause may be attributed the presence of liver-cells (Jürgens), and decidua cells (Schmolz), found in the pulmonary circulation. Catarrhal pneumonia is common here, as it is in all conditions in which coma plays such an important part. A quite common morbid change is found in the liver. I refer to the "hepatitis hæmorrhagica" of Jürgens. In this condition the liver is studded with minute hemorrhages. They often coalesce on the surface, forming large red patches, in marked contrast to the normal liver color. The liver cells are swollen, cloudy, and disintegrated. This hemorrhagic condition of the liver was most prettily depicted in those cases accompanied with jaundice, the "Eklampsie mit Ikterus" of German authors—the "Eclampsie avec Ictere" of the French.

Kidney changes are common, but by no means constant.

The "Schwangerschaftsniere" of Leyden (parenchymatic nephritis) came most frequently under observation. The cirrhotic form is not often seen.

Cerebral hemorrhage came under observation four times. In one of the cases a hemorrhage in the fourth ventricle was the cause of the speedy termination. These were not merely minute capillary extravasations, but hemorrhages of considerable dimensions. The spleen showed nothing abnormal. The uterus, which was examined macroscopically in all cases, and with the microscope in two, remained unchanged. The spinal cord, I am sorry to say, was examined in two cases only, and showed nothing abnormal. Now these series of pathological changes give us no clew to its etiology, it therefore behooves us to look for more than one etiological factor.

To Drs. Israel, Oestreich, and Jürgens, of the Berlin Pathological Institute, I tender my sincere thanks for many acts of kindness, and for advice given in connection with this subject. I owe also a debt of gratitude to Dr. Gebhard, of the Berlin Clinic for Diseases of Women.

158 Ross Street, Brooklyn, N. Y.

Chloralose: a New Hypnotic.—Hanriot and C Richet recently reported to the Académie des Sciences the results of a research on the physiological and therapeutic action of a new substance, which they call "chloralose" (*Sem. Méd.*, January 11th). This is a crystallized body, formed by the reaction of anhydrous chloral and glycose on each other, with elimination of water. Chloralose has a bitter taste, and is fairly soluble in hot water, but in cold water only in the proportion of 6 grammes to a litre. Its physiological action may be summed up in the statement that it has a hypnotic effect on the encephalon and an excitant effect on the medulla. By experiments made on themselves the authors ascertained that doses of 50 centigrammes, and even 1 gramme, could be given to man. These, however, must be considered heroic doses, and a dose of 20 or 40 centigrammes is sufficient to induce dreamless, quiet sleep, without any sense of fatigue, headache, or dyspepsia on waking. In certain cases, patients unable to tolerate chloral or morphine have obtained refreshing sleep with the help of chloralose.

McGill Medical College.—It is reported that a prominent citizen of Montreal had offered to give the college $100,000 toward the endowment of a Chair of Medicine with the understanding that Dr. Osler, of Baltimore, should be given the professorship.

ACUTE SUPPURATIVE OTITIS MEDIA FOLLOWING LA GRIPPE.

With Four Illustrative Cases.

By R. D. BARRET, B.S., M.D.,

St. Louis, Mo.

Of the various and manifold afflictions which may properly be said to be the direct results of an attack of influenza, acute inflammation of the middle ear is one of the most common. The disease is essentially one affecting the mucous membranes and while it does not confine itself to one particular mucous membrane, its favorite seat seems to be that of the nasal and the naso-pharyngeal spaces. From here it extends into the bronchial tubes so frequently, and we might say invariably, that it well deserves the name of "epidemic bronchitis." But beginning as it does so constantly in the nasal and the naso-pharyngeal spaces, the brunt of the trouble has to be borne by the lining membrane of these passages.

That this affection is caused by a specific germ is no longer a disputed question but a settled fact. The bacillus of influenza has been isolated and well studied by many bacteriologists. This germ is a pus-producer and the product of the inflammation caused by it is always pus.

It has been observed that wounds occurring in persons suffering from influenza do not heal so readily as they would otherwise. They do not unite by first intention so easily and stitch-abscesses are not uncommon.

This germ has, by way of the Eustachian tube, an easy means of extension from the naso-pharynx into the middle ear, and there it finds a mucous membrane which is very susceptible to its influence.

Weichelbaum has found this bacillus in the pus discharged from the ear of patients suffering from acute otitis media, the result of this disease.

It may be truly said that no two cases of influenza are alike and yet many are much alike in their effect upon the ear. It is a curious fact that the left ear is the one most commonly affected. Thus of the four cases which I shall report, in three of them the left ear was the one in which the trouble was located; and in my experience this has been about the ratio, always. How well my observation is borne out by that of others I am unable to say, but I am inclined to think that it will be much the same.

Very rarely are both ears affected at one time, though the trouble may extend to one within a few days or a week after its appearance in the other ear. Such cases are the exception, however. The course of the trouble and its train of symptoms does not differ much, except in its severity, from that of acute purulent otitis media from other causes.

The history will be that the patients suffered from an attack of la grippe some two to four weeks previous to the time at which they consult you. For the past few days they have been suffering with an intense pain in the ear. Often they have stood this for several days and will tell you that the day or the night before the ear began to discharge freely, saturating several cloths or the pillow, and since that time it has felt better. If the ear has not begun to discharge, on examination you will find a drumhead in a state of violent inflammation, intensely congested, bulging, and the epithelium exfoliating.

This latter condition is most frequently the result of the injudicious and always harmful solicitude on the part of the patients and their friends, who pour all sorts of oils and other liquids into the ear and thereby macerate the drumhead and the walls of the external canal, but do no good whatever. Very frequently, I am sorry to say, this is done by the advice of the family physician. The indiscriminate pouring of "drops" into the ear, because it is a convenient hole to pour something into, cannot be too frequently nor severely condemned. A characteristic of acute otitis media following la grippe is the bulging of the membrana flaccida.

In no other form of ear disease does this occur so fre-

quently. Almost invariably we find this membrane protruding and the perforation located in it. This bulging may be of all degrees, and go so far as to form a pouch which hangs down over the true membrane, as in the third one of the following cases. In one case I remember this protruding membrane so closely resembled a polyp springing from the superior quadrant of the membrane that, except for the history, a diagnosis of polyp would most certainly have been made.

The tension on this protruding and overhanging membrane is probably one cause of the intense pain in these cases. Certain it is that by giving some support to this mass, by means of a little cotton or some boracic acid placed carefully under it, the pain is often much relieved. Paracentesis performed in this place will, by giving free exit to the retained secretion, also relieve the tension and consequently the pain caused by it.

The pain in these cases is very severe and is neuralgic in character. Patients will say that it is unbearable and that if they do not get some relief they will become insane. Often this severe pain will persist after the disease is in a fair way to recover and the membrane is almost normal again. Politzer has observed and reported cases of this kind. In these cases it is undoubtedly neuralgic, and a tonic treatment is often of great benefit.

The discharge is at first of a watery, serous nature, but becomes more purulent as the disease advances. It is very profuse, as a rule, in some cases as much as a teacupful being poured out within a short time after the perforation of the membrane has occurred. Often it accumulates within twelve hours in sufficient quantity to rupture the membrana.

The temperature in these cases is usually elevated somewhat, ranging from 99° to 101° F. The tongue is coated, bowels irregular, generally constipated, and the appetite poor.

The treatment will depend upon the stage of the disease. If we see the case before the membrane has ruptured and the discharge set in, our object should be to prevent that from occurring. To this end local and general depletion will serve the best purpose. A brisk purge of calomel given, as I prefer, not in a single large dose but in small doses an hour apart, is the first thing; and this should be given in all cases whether perforation has occurred or not. The judicious use of leeches about the tragus and the mastoid process is of value as a local means of relieving the inflammation.

The nasal cavities should be cleansed with an alkaline wash, of which Dobell's solution is one of the best, and the Eustachian tube opened by Politzer's or some other method of inflation, to permit of free drainage from the middle ear. After the membrane has ruptured the same treatment of the nasal cavities is necessary and inflation of the ear should be kept up, preferably by means of the Eustachian catheter, to force the secretion from the middle ear into the external auditory canal, which should be wiped dry of all discharge with a little cotton on a cotton-holder.

This should be repeated once each day until the discharge has stopped and the membrane has healed. For the relief of the pain nothing has yet been found that will take the place of morphine. In some cases phenacetin will answer, but in the majority morphine will have to be given to relieve the suffering and allow of the much-needed sleep.

Of course it must be prescribed carefully and its use promptly discontinued as soon as practicable. Paracentesis of the membrana tympani will lessen the pain by relieving the tension, in many cases; but this little operation is rarely needed and should not be done unless the indications for its use are clear. If there is already a perforation which is too small to permit of free drainage it may be enlarged, or if it is evident that perforation must inevitably occur we may puncture the membrane at its most protruding point; but in the majority of cases a little conservatism in this direction will not be regretted.

Most patients suffering with this trouble will be greatly benefited by a little tonic treatment, some preparation of iron combined with some of the bitter tonics being the best. If properly treated, this disease can be relieved in a few weeks at most, but if neglected it will run on into a chronic trouble which is always hard to cure; or more serious results may be the consequence, among which may be mentioned pyæmia, thrombosis, phlebitis, meningitis, encephalitis, and death. In children we may have mastoid disease, even in spite of careful treatment.

I would suggest to those in general practice who treat cases of influenza that they cleanse the nasal and nasopharyngeal spaces frequently in those cases in which these passages seem to suffer to any considerable degree, as a prophylactic measure against the spreading of the inflammation to the ear, for I believe that a little timely medication in this direction will save many a one a great deal of suffering. The following cases illustrate well the points I have tried to bring out. They were treated by me in the aural department of the St. Louis Polyclinic and Post-Graduate School of Medicine.

Case I.—M. L——, male, aged twenty-two, carpenter. First seen December 28, 1891. Had slight attack of la grippe two weeks before. Ever since has had some pain in the right ear which became very severe yesterday. Pain continuous and prevents sleep. Bowels regular, tongue coated, appetite poor. Nose "running" freely, and throat sore. No discharge from the ear, but constant tinnitus. Membrane congested and macerated from sassafras oil which he had poured into the ear. The external canal was wiped dry of oil and lightly tamponed with cotton. The nasal cavities were cleansed with an alkaline wash (Dobell's solution), the ear gently inflated by means of the catheter and the throat touched with a solution of the subsulphate of iron and glycerine, one to five. He was given calomel in one-eighth grain doses, to be taken every hour until the bowels moved.

December 29th.—Ear discharging freely and the pain very much less. Bowels moved freely, twice. The ear was wiped dry, the nasal cavities cleansed, and the ear inflated as before.

December 30th.—Pain very severe; sleep impossible. Discharge profuse. Prescribed morphine sulphate, one-eighth grain every two hours.

December 31st.—Some better. Pain not so severe. Slept after taking two of the morphine powders.

From January 2d to 11th he was alternately better and worse. Slept some nights without the use of morphine, but others was compelled to resort to it to obtain relief.

From January 12th to February 3d, when he was discharged, he steadily improved. Pain and discharge ceased, the membrane rapidly healed and regained its normal appearance. There still existed a slight tinnitus at times, and some little impairment of hearing on that side. The same local treatment was continued up to the time he was discharged.

Case II.—J. H——, male, aged twenty-nine, carpenter. First seen January 22, 1892. Had la grippe about a month before. For the past week has had pain in left ear. Cannot sleep. Had discharge from the same ear about twelve years ago. Appetite fair, tongue coated, bowels irregular. Discharge moderate in quantity. Tinnitus constant and of a pulsating character. Membrane highly congested; perforated (?).

The nasal spaces were cleansed with the spray, the ear inflated by means of the catheter, and the external canal wiped dry and lightly tamponed with cotton. He was given phenacetine in three-grain doses every two hours. Also calomel in one-fourth grain doses every hour until the bowels moved. He was directed to apply hot salt-bags to the ear for the relief of the pain.

January 23d.—Suffering intense pain. External auditory canal swollen almost shut. Eustachian tube closed and could not be opened by any means of inflation. Very little discharge from the ear. Had four movements from the bowels. Local treatment the same as before and in addition a cotton tampon was packed tightly into the external canal and he was told to let it

stay if he could stand the pain. Morphine in one-eighth grain doses was given to be taken every two hours at night.

January 24th.—Slept after taking three powders. Had removed the tampon from the ear within an hour. External canal so swollen that the walls touched. Tampon, small one, reapplied.

January 25th.—Some better. Swelling considerably reduced but pain still very severe.

From this time he improved rapidly. The swelling disappeared, pain and discharge ceased. The Eustachian tube opened and inflation became easy, and in a week he passed from under observation, almost well. At no time was I able to detect a perforation in the membrane, and it must have been very small.

Case III.—M. R——, aged twenty-three, laundress. First seen January 25, 1892. Had la grippe two weeks before and for the last week has had severe pain in the left ear and over that side of the head. Ear has been discharging for four days. Bowels constipated, tongue coated, appetite poor. Considerable coryza and constant ringing in the ear. Membrane congested and the membrana flaccida bulging considerably.

The external canal was cleansed in the usual way, the nasal spaces sprayed and the ear inflated by Politzer's method as the swelling and congestion in the posterior nasal spaces prevented the use of the catheter. Five grains of phenacetine every two hours was ordered and also calomel in one-eighth grain doses every hour until the bowels moved.

January 26th.—Some better. Pain not so severe. Bowels had moved freely.

January 27th to February 5th.—Alternately better and worse. Discharge diminished and pain seemed to increase. The membrana flaccida bulged and hung down over the true membrane, almost closing the perforation. Introduced a little boracic acid and a minute pledget of cotton under it to relieve the tension. Phenacetine in five-grain doses helps to relieve the pain and with the aid of hot salt-bags to the ear she is able to sleep.

February 7th to 14th.—Much the same. Complains of the pain being in the head more than the ear. Feels weak and dizzy.

February 15th.—Discharge has ceased. Membrana flaccida is receding and looks like a drying up cyst.

From this until the 24th she improved rapidly, but on that day she complained of intense pain over the top of the head. Felt weak and dizzy. Fainted twice that morning. Pulse rapid and weak. Ordered her to take a teaspoonful of whiskey three times a day and to stop the phenacetine. From this time until two weeks later, when she was lost sight of, she improved rapidly. Sometimes had pain in the head for an hour or two and had two or three more fainting spells, but under tonic treatment this was rapidly disappearing.

Case IV.—J. L——, male, aged thirty-six, printer. First seen December 5, 1891. Had la grippe about a year ago and thinks he had a second attack a week ago. Since then has had pain in the left ear. Could not sleep. Yesterday the ear began to discharge and the pain is less severe.

Bowels constipated, appetite poor, tongue coated. Profuse discharge, constant tinnitus, pain only at times. Membrane congested and perforated.

The same local treatment as in the preceding cases was pursued, and calomel in one fourth grain doses prescribed.

December 6th to 10th.—No improvement, profuse discharge, pain increasing and phenacetine and quinine has no effect on it.

December 11th.—Pain very severe. Mastoid process tender. Some swelling in front of the auricle. Gave him morphine in one-eighth grain doses every two hours.

December 14th.—As the perforation was too small to admit of free drainage, Dr. D. C. Gomble enlarged it by a paracentesis. Given tr. ferri citro-chloride in teaspoonful doses three times a day.

December 15th to 22d.—Improving slowly. Discharge less. Pain only at times. Uses morphine only at night and some nights does without it.

December 23d.—Complains of pain in front of auricle. Slight swelling noticed there.

December 24th.—Pain severe. Swelling increased and very tender. Ordered calomel, one grain in four doses an hour apart, followed by a large dose of sulphate of magnesia.

December 25th to 29th.—Much improved. Swelling disappeared and pain grew less.

December 30th.—Passed the worst night he had had. Intense pain over the top of the head. Morphine in one-eighth grain doses has no effect. Increased the morphine to one-fourth grain doses. Ordered quinine and salol, of each three grains.

December 31st.—Very much better.

January 2 to 9, 1892.—Improved rapidly. Discharge and pain ceased. Membrane healed and he was dismissed well, but with some impairment of the hearing power on that side.

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Progress of Medical Science.

The Rational Treatment of Puerperal Septic Infection.—Dr. J. L. Rothrock believes that puerperal infection is caused by two widely different groups of bacteria, which must be distinguished since they necessitate different plans of treatment. In infection by the pathogenic group of bacteria, local treatment is of little avail, unless instituted early, and it should be vigorously and systematically carried out, even at the risk of being superfluous. The curette should not be used except in the early stages. When infection is localized to the uterus and adnexa, recovery is the rule, and tonic and supporting treatment the indications. If suppuration ensues, the abscess should be drained as soon as the diagnosis can be made with certainty. Most cases of peritonitis which recover by the expectant plan of treatment are localized. In sthenic cases of peritonitis, surgical interference is not only justifiable but the rational mode of treatment. In the asthenic variety, operation is of doubtful utility, and contraindicated if the patient is in collapse.—*Northwestern Lancet.*

Detection of Foreign Bodies in the Cornea.—Dr. Jackson states that an aid to the detection of foreign bodies in the cornea is the use of a solution of fluorescin. A good solution consists of:

℞ Fluorescin..... gr. j.
Sodium carbonate..... gr. ij.
Distilled water..... ʒ j.

A drop of this is placed on the suspected cornea, and after two or three minutes the excess is allowed to be washed away by the tears. It is then found that while on the uninjured cornea not the slightest effect has been produced, the corneal tissue in the neighborhood of any recent abrasion has been stained a light green. This discoloration directs attention to the locality of the injury, and the stained tissue furnishes a background against which any foreign body of dark color is readily seen.—*Medical Times and Register.*

Slow Pulse.—According to Dr. Prentiss, the chief causes of slow pulse are the following: 1. Diseases or injuries to the nerve-centres, producing either irritation of the pneumogastric or paralysis of the sympathetic (accelerator) nerves of the heart. 2. Diseases or injury of the pneumogastric nerve, increasing its irritability. 3. Disease or injury of the sympathetic nerves of heart, paralyzing them. 4. Disease of cardiac ganglia, by which the influence of pneumogastric nerve preponderates. 5. Disease of the heart-muscle (degeneration), whereby it fails to respond to the normal stimulus. 6. The action of poisons, as lead or tobacco, either on nerve-endings or centres. The poison generated in salt fish. Another possibility is malarial poisoning.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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NEW FACTS REGARDING MEDICAL EDUCATION.

EVERY physician must take a very personal interest in the question of the making of doctors. The new men are to be his rivals in work. If their number is excessive, the stress of competition adds to the arduousness of regular work. If his competitors are men of little education and culture, his own standing as a physician is lowered.

Dr. Bayard Holmes has recently collected some facts on the neglect of medical colleges which ought to appeal very strongly to the members of the medical profession. Dr. Holmes has had the opportunity of using the proof-sheets of the forthcoming "United States Educational Report for 1889-90." These "Reports" always contained interesting matter, but usually it is very old by the time it reaches the public.

One of the first things shown is the relative increase of the different medical sects in the United States. It appears from the figures given that during the last decade the attendance at regular medical schools has increased twenty-six per cent.: attendance at eclectic schools, two per cent.: while that at homœopathic schools has fallen off about three per cent. The actual figures for the year 1890 are: Regular, 13,044: eclectic, 600: homœopathic, 1,128.

Relatively to other professions there has not been much change in this country of late. Among 100,000 inhabitants there are twenty-four students of medicine, seven of law, and eleven of theology. In Germany the number of medical students per 100,000 inhabitants is about eighteen; in France, seventeen. Dr. Holmes's figures show very plainly that the average time of study for American medical students is less than three years: that, practically, the great majority of medical students graduate after an actual period of study of eighteen months.

It appears, says Dr. Holmes, that the course of study is abbreviated by the absurd custom of having medical schools open only one-half the year. "This means that almost $5,000,000 lie unproductive one-half the year. In dollars, this is a loss of $250,000 a year. In educational units it means that students receive only two-thirds the training they are supposed to receive. In plain English, it means that in the United States, in 1890, 4,500 men were given the degree of doctor of medicine after studying on an average less than eighteen months."

It is unpleasant to learn that though there has been a slight absolute increase in the number of medical students having degrees in letters or science, the relative number has fallen considerably. This shows that medicine is not an attractive calling to college-bred men, and the reasons suggested are that:

"1. Medicine does not pay.

"2. The study of medicine is not attractive. *a*. The subject is inherently repulsive and uninteresting. *b*. The conduct of medical schools makes medical education repulsive and uncongenial to an educated man.

"3. The instructors in colleges and universities do not encourage men to take post-graduate study in medicine.

"4. University corporations do not credit work done in medicine and reward it as they do work in other departments."

The following conclusions are drawn:

1. The average course of study in the United States is still less than three years; *i.e.*, eighteen months.

2. The antiquated method of repetition still prevails in the majority of medical schools.

3. The number of students of medicine is absolutely increasing but (in relation to population) relatively diminishing. The homœopathic and eclectic schools are hardly holding their own.

4. The education of the average medical student is superior to that of ten years ago, but the ratio of matriculates having degrees in science or art is actually diminishing even in the richest, best located, and only endowed medical schools.

5. The medical department is, so far as we know, neglected by every university in the United States; it is farmed out or left to shift for itself on half rations, or in the best instances, treated from an educational standpoint in an exceptional manner.

6. Medicine is neglected by the benevolent and by the State. From the former it has received almost nothing, and from the latter not a tithe of what has been lavished on technological schools, and this in spite of the fact that the State and all benevolent institutions have put a heavy task of gratuitous, and often compulsory, service on the medical profession.

7. The medical schools are wasting their substance by keeping their doors shut half the year, and they are degrading the profession by allowing uneducated men to matriculate and uncultured men to graduate.

8. The laws which allow the diploma to become a license to practise, put the short-term no-requirement schools in a position to dictate to the schools that offer a medical education in place of a degree.

THE REPUTATION OF THE DEAD.

THE coroner system of this city and State has produced a good many rank iniquities, but nothing so shocking and painful as the recent occurrence in connection with the suicide of a young girl in this city. The coroner published as part of his report the following:

"The autopsy, while not revealing that the young woman had the dread of maternity as an incentive to suicide, suggested that she might have been driven to the deed by remorse for recent conduct, and had a reason for passing herself, in contemplation of suicide, as a married woman."

We do not say that these were the coroner's words, but

this statement was given to the press as coming from him, and its authenticity has not been denied. It is difficult adequately to characterize a proceeding which thus wantonly publishes to the world the suspected dishonor of the dead.

In a prominent newspaper in this city there occurs the following comment on the recent suicide of this young woman: "The evidence of suicide was clear and conclusive, and the lugging in of a coroner's autopsy to blacken the record of the girl's life was a wilful impertinence on the part of that official."

We are quite in accord with this lay opinion on the subject, for we believe that, aside from the consideration of common decency, from a medical stand-point alone, the public should not be regaled with the details of autopsies upon unfortunate young women, or with prurient hints as to the influences to be drawn from the revelation of the post-mortem table. As every gynecologist can testify, the virtue of a young girl is not to be positively determined by an inspection of her external genitals, neither is an early abortion to be predicated because of mere enlargement of the uterus. It is hardly a fortnight since a hasty inference of the latter sort placed a reputable physician under a cloud on a charge of malpractice, from which he was fully exonerated by a jury of experts.

Competent pathologists know that the greatest care must be exercised in drawing such inferences from an examination of the female pelvic organs, and would be slow to give a positive opinion on the witness stand based on anatomical evidence alone. How unfortunate, then, is the tendency at the coroner's office, to issue *ex cathedra* statements to the daily papers, not only damaging to the reputations of the dead, but injurious to public morality—statements which are too often based on evidence that would not stand for an instant in the courts of law. Sometimes this is done thoughtlessly, but more often, it would appear, out of pure love for notoriety. We doubt not that many coroners' autopsies are entirely unnecessary, so far as the obtaining of any evidence as to the cause of death is concerned. If the reputation of a physician's patients is sacred, how much more carefully should that of the dead and their sorrowing friends be guarded?

We believe that unless it becomes necessary for a coroner to report in court the details of an autopsy upon the body of an unfortunate young woman, neither such details nor any hint regarding the case should be furnished to the press. In the interest of decency and morality we protest against this intrusion upon the sanctity of death.

THE NEW YORK ACADEMY AND THE CROTON-WATER SUPPLY.

The New York Academy of Medicine, through its Special Committee, has opposed the bill introduced into the Legislature for the purpose of buying up the Croton watershed, on the ground that it was a needless expense, and that its purchase would not give assurance of sanitary cleanliness of the area acquired.

The Committee went to Albany and presented its arguments, also a substitute bill. This provides for the creation of a Croton-water commission, consisting of the Commissioner of Public Works, the Commissioner of Health, and a member of the State Board of Health (to be appointed by the Governor on the recommendation of the said Board of Health), together with two Croton water commissioners, one of whom shall be a resident and citizen of the city and county of New York, to be appointed by the Governor on the recommendation of the Executive Committee of the Chamber of Commerce, and the other of whom shall be a civil engineer, skilled in sanitary science, to be appointed by the Governor on the recommendation of the American Society of Civil Engineers of the City of New York. This commission is empowered to effect any acquisition or extinguishment of interest in the real estate concerned as may be necessary for "the sanitary protection of all rivers and other water-courses, lakes, ponds, and reservoirs in the counties of Westchester, Putnam, and Dutchess, so far as the same now are, or hereafter may be, used for the supply of water for the city of New York."

The Committee was defeated in its object, the interests of the opposition being too strong. It has, however, the consolation of knowing that its position was right and its recommendation wise. In fact no arguments worthy of the name were brought against the bill. The views expressed have the support of the profession and of unbiassed sanitary experts.

SPIRITUALISM SCIENTIFICALLY INVESTIGATED.

The recent death of one of the famous Fox sisters, who was so identified with the rise of spiritualism in this country, occurred almost simultaneously with a serious and scientific effort to investigate mediumistic phenomena by certain distinguished Italian savants. It has brought the subject of spiritualism to the front, temporarily, at least.

It seems that there is in Milan a young woman whose spiritualistic powers as a medium have excited great general interest. In consequence of this a committee, which included among its members Professor Cæsar Lombroso, Professor Schiaparelli, and Professor Charles Richet, of Paris, undertook an extended investigation of the phenomena, following strictly scientific methods. The performances of the medium, though done by an ignorant Italian peasant, have a strangely American character. There were rappings, table-tipping, levitation, the usual dark-room phenomena of bell-ringing, face-slapping, luminous arms and faces, etc. The eminent scientists investigated all this with the greatest solemnity, and according to the approved rules of scientific evidence. They finally admitted that they were mystified by the performances but not satisfied; they were not convinced of fraud, yet in no case could an experiment be carried out under perfectly satisfactory conditions. They sign a report admitting their perplexity.

It is unfortunate that these gentlemen did not make an experienced prestidigitator a member of their committee, and also that they did not read a little of the history of American spiritualism, and its decadence under the frequent exposures which have been made of its tricks.

Rubber Catheters may be kept sterile in long glass jars in the bottom of which are pieces of flannel saturated with mercury from which a vapor is given off.—Lannelongue.

News of the Week.

Pan-American Medical Congress. Section on Hygiene, Climatology, and Demography.—Persons proposing to present papers before this Section are requested to communicate with either of the undersigned *immediately*, that titles of subjects may be properly classified for the programme of the proceedings of the Congress. The only limitation as to subject matter is that it shall have a sanitary, climatological, or statistical bearing. Members of the Section on State Medicine of the American Medical Association, the American Public Health Association, the American Climatological Association, the American Academy of Medicine, and of State and Municipal Boards of Health, are especially invited to contribute the results of their several experiences. The languages of the Congress being Spanish, Portuguese, French, and English, papers may be presented in either, to be translated into the others, for which reason their text should be in the hands of the secretaries at the earliest possible date.—Albert L. Gihon, M.D., *President*, 145 East Twenty-first Street, New York City; Pedro José Salicrup, M.D., *Secretary* (Spanish), 129 East Seventeenth Street, New York City; Peter H. Bryce, M.D., *Secretary* (English), Toronto, Canada.

Virchow in London.—The visit of Professor Virchow to London has awakened great interest in the character and work of the distinguished pathologist. He delivered a lecture on cellular pathology, and was dined by the leading physicians and scientists of the city. The doctrine that every cell comes from a cell was first applied by Virchow to disease; and it was in teaching and applying this that its great originality and power of observation and reasoning were shown. It was not Virchow, however, who first discovered this law and applied it to living beings, but Von Baer, Schwann, and other illustrious predecessors of the Berlin professor.

House Cleaning in the Tenements.—The Board of Health held a special meeting March 20th, to take measures to lessen the death-rate among the tenements. The following resolution was passed:

Whereas, It is of great importance to the welfare of this city that the cleanliness necessary to the preservation of the public health should be secured without delay, therefore,

Resolved, That the Sanitary Superintendent be and is hereby directed to cause a thorough and systematic inspection to be made of the sanitary condition, first, of yards and cellars; second, of roofs and roof tanks; third, of the water-closets, plumbing, and drainage; fourth, of the walls, ceilings, and floors of every tenement in this city; and whenever any want of cleanliness, or any defect in plumbing or drainage, or any other unsanitary condition is found, to order that the said premises be immediately cleaned and repaired.

Dr. Edson will begin the work at once.

Amending Quarantine Regulations.—Secretary Carlisle has issued a circular amending paragraph 18, Article XI. of the Quarantine Laws and Regulations, February 24, 1893, to read as follows: "Steam vessels from a suspected or infected port where yellow fever prevails, may be allowed to enter at the port of Baltimore and ports north of Baltimore, after five days from date of departure from such ports, without disinfection or detention, unless in bad sanitary condition or with bad sanitary history. In either case they will be detained in quarantine five days after disinfection. This regulation to apply to the North Atlantic coast only." The following addition to Article III. of the Quarantine Regulations of February 24, 1893, has been issued by Secretary Carlisle: "Inspection of passengers taken on board vessels touching at intermediate foreign ports, and subject to inspection under the provisions of Article I., shall be made by the consular officer of the United States at said port, in the manner prescribed for inspection at the port of departure. In case there shall be no consular officer at such port, then the inspection shall be made by the local health officer. Certificate of such inspection shall be made by said inspecting officer, and shall be attached to and become a part of the vessel's bill of health."

Cholera in Russia.—Owing to the spread of cholera in certain districts of Russia, a congress of sanitary officers has been summoned to meet and arrange for protective measures against the disease. In the province of Podolia, which adjoins Galicia, and has considerable trade with Austria and Germany, the number of cases of cholera in the last fortnight of February, according to the official report, was 305, of which fifty-nine were fatal.

Thirteen a Lucky Number.—Mrs. Lot Irving, of Buena Vista, Ga., aged twenty-five, gave birth March 16th to her thirteenth child. The mother is doing well and the father is contented with his Lot.

Prize of the County Medical Society.—The members of the County Society are invited to compete for the annual gold-medal prize, of the value of one hundred dollars, to be awarded by the Society at its next annual meeting, in October, for the best essay on any medical or surgical subject. The award will be subject to the following conditions: 1. The competitor shall be a member of the Medical Society of the County of New York. 2. The competitor's name shall not be revealed until after the decision of the Committee on Prize Essays has been rendered. 3. The essay shall be designated by a motto, and shall be accompanied by a sealed envelope exhibiting the same motto and enclosing the author's name and address. 4. If no essay is presented which in the judgment of the Committee merits the prize, no award will be made. 5. The essay must be in the hands of the Committee on or before October 1, 1893. E. B. Bronson, *Chairman of the Committee*, 123 West Thirty-fourth Street.

Illness of Professor Charcot.—The *Paris Figaro* of March 8th says: "Professor Charcot, while giving his regular lecture at the Salpêtrière yesterday, was seized with a sudden illness which prevented him from continuing. He suffered from a sense of suffocation which lasted more than an hour, but after rest and some precautions, the eminent professor was relieved, and in the evening was quite well. He is expected to resume his lectures tomorrow."

Compulsory Hospital Provision for Railroad Employees.—A bill has been introduced in the Missouri Legislature, and favorably reported, which provides for the obligatory establishment, by the railroads of the State, of hospitals for their sick and injured employees, on petition of at least one hundred such employees; the

funds for the maintenance of such hospitals being supplied by assessments per capita on the wages of the employees. For the purpose of establishing hospitals under the provisions of this act, a Board of Supervisors for each system or line is to be elected, consisting of five persons, three of whom shall be chosen by the employees, and the other two by the railroad interested. Each hospital system is to be conducted by a chief surgeon and assistants, etc. The plan is similar to that of the Missouri Pacific Hospital system.

Miss Garrett does not Like the Way her Medical College is Run.—The following item is taken from a daily paper: "A committee of the trustees of Johns Hopkins University has been appointed to confer with Miss Mary Garrett, who recently gave $354,764 to complete the $500,000 endowment for the medical department of the university. Miss Garrett is not satisfied with the curriculum prepared by the medical faculty. In the conditions accompanying the gift to the university she outlined the curriculum so far as it pertained to the studies upon which students should be examined for admission, and she will not submit to any changes."

Dr. James Anderson, a well-known London physician and neurologist, died recently, aged forty.

Medical Advertising.—Dr. Unna has been taken to task by the *Medical Press and Circular* for announcing his change of residence in the lay press, and incidentally mentioning some of the cutaneous diseases which he treats. The *Press* states, in answer to Dr. Unna's reply which it prints but evidently does not look upon as a valid explanation, "that no specialist of repute in this country would venture on such an announcement."

A State Laboratory for Pathological Research.—A bill has been introduced into the Legislature of Nebraska which provides for the erection and maintenance of a Patho-Biological Laboratory for original investigation of infectious diseases. The bill appears to have been wisely and judiciously framed. It aims to have the laboratory conducted according to the same principles which govern Koch's Institute in Berlin, and the Nebraska Laboratory will consequently, if this bill be passed, present opportunities for original research of infectious diseases from all points of view. It will be the first laboratory of its kind erected in this country, and Nebraska will merit the gratitude of her people at large, and also of the whole American medical profession, if the required appropriation—a very moderate sum—is granted, because Nebraska will then have taken the first important step in the desired direction, and this will attract the attention and the emulation of sister States all over the Union.—*Journal of American Medical Association.*

The French Surgical Congress.—The seventh session of the *Congrès français de Chirurgie* will be opened in Paris on Monday, April 3d, under the presidency of Professor Lannelongue. The subjects announced for discussion are "Fibrous Tumors of the Uterus" and "The Surgical Treatment of Tubercular Affections of the Foot."

An Attack on the Morality of Chattanooga Physicians.—The Rev. Dr. J. P. McFerrin, of Chattanooga, Tenn., has created a decided sensation in medical circles in that city. During his sermon, in referring to the immorality existing in the city, the "Rev." said that "most physicians' offices in this city were regular places of assignation. That no matter what illness or complaint befell women, it was only when death was imminent that a male physician should be permitted to examine them, and then in the presence of some other member of the family." The Chattanooga Medical Society has called a special meeting to take action in the matter.

Some Comparatively New Drugs and their Scientific Names.—The *Progrès médical* gives the following list:

Common Names.	Scientific Names.
Antipyrine, Analgesine	Phenyldimethylpyrazoline.
Antifebrine	Acetanilide, or phenylacetamide.
Antinervine	Salicylbromanilide.
Antisepsine	Paramonobromophenylacetamide.
Antiseptol	Cinchonine sulphiodate.
Anisol	Methyl phenate.
Aristol, Annidaline	Iodothymol.
Betol, Naphthalol	Beta-naphthol salicylate.
Bromol	Tribromphenol.
Creolin	A cresol preparation.
Cresalol	Paracresol salicylate.
Exalgine	Methylphenyl acetamide.
Hypnal	A mixture of chloral and antipyrine.
Iodol	Tetriodopyrrol.
Iodopyrine	Iodantipyrine.
Orexine	Phenyldihydroquinazoline hydrochloride.
Phenethol	Ethyl phenate.
Primuline	Sodium thioparatoluidinesulphonate.
Saccharin	Orthosulphamidobenzoic anhydride.
Salol	Phenyl salicylate.
Salophen	Acetylparamidosalol.
Salipyrine	Antipyrine salicylate.
Sulphonal	Diethylsulphondimethylethane.

The Hospital Fund.—The Distributing Committee of the Hospital Saturday and Sunday Association met March 21st, in the Office of Mayor Gilroy, and distributed $50,000 of the fund as follows: Mount Sinai Hospital, $5,626.78; St. Luke's, $5,486.16; Montefiore Home, $5,345.61; Roosevelt Hospital, $4,293.46; German Hospital, $3,704.79; Ruptured and Crippled, $3,528.15; St. Mary's Hospital, $1,984.38; Home for Incurables, $1,942.45; Isabella Heimath, $1,897.88; Mothers' Home, Misericordia, $1,371.76; Colored Hospital, $1,354.24; Skin and Cancer Hospital, $1,340.75; Woman's Hospital, $1,224; Home of the Holy Comforter, $1,019.42; Orthopœdic Hospital, $991.86; Cancer Hospital, $966.43; Manhattan Eye and Ear Hospital, $961.30; French Eye and Ear Hospital, $920.51; Post-Graduate Eye and Ear Hospital, $840.61; Manhattan Dispensary and Hospital, $677.72; Eye and Ear Infirmary, $602.43; Infirmary for Women and Children, $571.14; Babies' Hospital, $547.48; St. Mark's Hospital, $552.23; Asylum for Lying-in Women, $494.79; Flower Surgical Hospital, $389.70; Ophthalmic Hospital, $356.20; Ophthalmic and Aural Hospital, $297.83; Medical College and Hospital for Women, $287.91; St. Andrew's Infirmary, $268.25; Home for Convalescents, $153.78.

Free Public Lectures on Cholera.—The Committee on Evening Schools of the Board of Education have arranged for a series of lectures on the "Nature, Treatment, and Prevention of Cholera." The lectures are to be under the general direction of Dr. Henry M. Leip-

ziger. They will be delivered in German, Hebrew, Italian, and English, in the different grammar schools, by Drs. F. A. Lyons, J. E. Newcomb, Louis Fischer, Henry N. Berg, and N. C. Phillips.

Foreign Bodies in a Lunatic.—In making a post-mortem examination of the remains of a female lunatic who died lately in a Russian asylum, the doctors had an extraordinary experience. They found in the woman's internal organs three teaspoons, which had been missing for a month prior to her death, as well as a piece of iron used to connect the handles of a door lock, and two triangular pieces of glass. It also transpired that three days previously another surgeon had abstracted a flat piece of steel five inches long and nearly an inch wide from the throat of the deceased. Yet none of these foreign bodies had anything to do with her death, which was caused by disease of the brain.

American Climatological Association.—The tenth annual meeting of the association will be held in Philadelphia, Thursday, Friday, and Saturday, May 25th, 26th, and 27th.

Obituary.

FRANK H. INGRAM, M.D.,

NEW YORK.

Dr. Frank Harold Ingram died of angina pectoris, at his home in this city, on March 17th. He had not been well for some time, and had been confined to his house since last Monday.

Dr. Ingram was born in Logansport, Ind., and was thirty-three years old. In 1879 he came to this city, and four years later was graduated from Bellevue Hospital Medical College. He made a specialty of insanity and nervous diseases, and several times appeared as an expert on the witness stand.

After serving as interne at the Blackwell's Island Insane Asylum for some time, Dr. Ingram became assistant physician in a private sanitarium at Canandaigua, N. Y. Afterward he was recalled to Blackwell's Island, where he was Assistant Superintendent of the female insane. This position he resigned four years ago, on account of the pressure of his private practice.

At the time of his death Dr. Ingram was Visiting Physician at the Hospital for Nervous Diseases and President of the Board of Pathologists of the City Asylums for the Insane. He was a member of the Society of Medical Jurisprudence and of the Medico-Legal Society.

LAURENCE JOHNSON, M.D.,

NEW YORK.

The sudden death, on March 18th, by pneumonia, of Dr. Laurence Johnson, of this city, is an event of unusual sadness, and one which will be keenly felt by a wide circle of friends. Few men were better known or more heartily esteemed. Dr. Johnson was a general practitioner of the highest and best type; he was identified with every effort made to advance the medical art and promote the interest of the physician. He had a large and lucrative practice, and was unhappily cut off while in the midst of the enjoyment of the fruits of his long activity.

Dr. Johnson was born at South Butler, Wayne County, N. Y., June 7, 1845. In December, 1863, he enlisted as a private in Company A, Ninth New York Heavy Artillery. On October 7th he was appointed First Lieutenant, and attached to the Eighth United States Colored Artillery at Paducah, Ky. He was discharged from service in May, 1865, and began the study of medicine, receiving his degree from Bellevue Hospital Medical College in 1868.

After service as an interne in Bellevue Hospital he commenced to practise in New York. He held a number of positions of honor, among them those of Visiting Physician to the Society for the Relief of Ruptured and Crippled, and the Randall's Island Hospital; attending Physician to the Northwestern and Demilt Dispensaries, Lecturer on Medical Botany and Clinical Medicine in the University of the City of New York, President of the County Medical Society, Librarian, and, later, Trustee of the New York Academy of Medicine; member of the Academy of Sciences, the Torrey Botanical Club, the Military Order of the Loyal Legion, and the Grand Army of the Republic.

Works by him upon medical formulas and medical botany were recently published. In 1881 he received the honorary degree of A.M. from Wesleyan University.

He married a Miss Roe, of Fulton, N. Y., who, with a daughter and son, survives him.

CHARLES PRATT STRONG, M.D.,

BOSTON, MASS.

By the death of Dr. Charles P. Strong, on March 14th, after a brief illness, Boston loses a man who, although only thirty-seven years of age, had already won a prominent position as a gynecologist. At the time of his death Dr. Strong had achieved an enviable reputation as a surgeon, while his success in private practice was regarded as phenomenal by those who did not know that it was the legitimate result of years of earnest, conscientious work. His gentle, modest disposition endeared him to his many friends, while his surgical skill and sound judgment made him respected by the leading members of the profession. The sudden quenching of that bright, active spirit has cast a shadow over the city in which he lived, and has saddened the hearts of his fellow-members in the American Gynecological Society. The world can ill spare such men. It seems as if we could never grasp the mystery that

> The good die first,
> And they whose hearts are dry as summer dust
> Burn to the socket.

BENJAMIN BALL, M.D.,

PARIS, FRANCE.

Dr. Benjamin Ball, Professor of Mental Diseases in the Faculty of Paris, member of the Academy of Medicine, Physician to the hospital Laennec and the asile St. Anne, died February 23d, in the fifty-ninth year of his age. Dr. Ball's contributions to the literature of mental and nervous diseases were numerous and important, though none of them have been published in English. His work, "Les Maladies mentales," is of great value, and in beauty and elegance of style is equalled only by one medical work that I know of, namely, the classical "Practice of Medicine" of the late Sir Thomas Watson. Indeed, Dr. Ball was called in Paris the "Orator of the Academy."

Dr. Ball was a member of numerous learned societies, among them being a foreign corresponding member of the New York Academy of Medicine. He was made at the same time, in 1889, with his friend of many years' standing, the late Fordyce Barker, an LL.D. of the University of Glasgow. The cause of his death was progressive paralysis.

The International Medical Congress.—The sessions of the Rome Congress will be held in the new Policlinic Hospital, outside the Porta Pia. The King of Italy has consented to open the Congress on September 24th.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 16, 1893.

D. B. St. John Roosa, M.D., President, in the Chair.

Presentation of a Bronze Copy of the Memorial to Leon Gosselin in the École de Médicine in Paris.—Dr. F. A. Castle made the presentation, in behalf of Mr. Samuel P. Avery.

Copy of a Rare Book.—At the same time Dr. Castle presented from the same donor a copy of a book which he said was of considerable interest and curiosity. A few years ago there was found in England, among some old books, a manuscript, largely written for the Fairfax family, and containing prescriptions and matters relating to medicine, etc., for use by that family nearly three hundred years ago. These had been deciphered, and it was a *fac-simile* of the original which was presented to the Academy. It was of interest as the reproduction of an old work, more or less medical in character, and as coming from a famous family, one branch of which settled in this country in the seventeenth century, with a grant of some six million acres of land on the Potomac, which was surveyed by George Washington, the Fairfax family having also married into that of the Washingtons. The eleventh Lord Fairfax is a citizen of the United States, located near Washington, a physician, though not in practice, and if he chose to exercise his right would be entitled, he believed, to take his seat in the House of Lords in England.

The matter suggested a phase of medical literature and study which of late years had not been much developed in the Academy. Since perhaps ten years ago the Academy had lost the services of a number of men who cultivated the love of books as books, and who did a great deal to accumulate in the Academy's library a number of valuable works of this kind, and he suggested that along with the rapid strides which were being made of recent years toward material and scientific advancement by the Academy, it would be of interest for the members, whenever opportunity presented, to add to the collection of rare and old works.

Dr. Castle moved that the thanks of the Academy be sent to Mr. Avery for his gifts. Carried unanimously.

The Applied Physics of Physical Diagnosis.—Dr. Charles E. Quimby read a paper on the above subject (see p 353.)

Dr. S. S. Burt then opened the discussion on Dr. Quimby's paper. He said that according to his observation the tendency in teaching physical diagnosis was toward too great refinement, which was confusing to students. In all special departments it seemed the teacher was liable to be carried away by the importance of his own subject. There was danger, too, of his being too much influenced by the imagination.

As to percussion, it was his opinion that it developed tone and also resonance. Tone, he thought, was the result of vibrations, and the number of vibrations in a given time determined the pitch. By variation of the rapidity of vibrations one ran up the scale by tones and semitones, and down again in the same manner. The modifications of the pitch were due to changes in rapidity of the vibrations and of intensity. Solid tissue in immediate contact with the object percussed would raise the pitch. A difference in the thickness of the chest-wall itself would, as the author had said, cause a difference in pitch and resonance. This was varied again by reflections of the sound-waves from cavities and vibrating bodies. Resonance was caused by either a cavity or solid body. It was obtained, for instance, on striking over the distended intestine, and also over the liver, in the latter instance the sound being called flatness. It was here spoken of as absence of resonance, yet it was a tone and had resonance. It seemed to him, therefore, that resonance depended upon tone, and that the two were inseparable. He believed, and had always been taught, that pitch rose with dulness, and it was likely Austin Flint would turn over in his grave if he could hear that it did not. Thus in pneumonia, the greater the consolidation the higher the pitch. Even where no disease existed, some chests gave higher pitch on percussion than others, due to difference in rigidity of the muscles, etc. He understood Dr. Quimby had made an exception in the application of the laws of sound to pathological cavities, which, he thought, was illogical, for the laws of sound must be uniform, whether with relation to physiological or pathological conditions. A clinical case was referred to, that of a woman sent by Dr. Charles K. Knight, without any suggestion as to the diagnosis. He thought he obtained slight dulness over a limited area of the lung, with slightly higher pitch, the pitch being somewhat higher on expiration than on inspiration. This diagnosis was satisfactory to Dr. Knight, who had a trained musical ear, and he had previously found tubercular laryngitis. Regarding Dr. Quimby's evidence from one of the Damrosch brothers, he might say that he asked the other of the two great musicians, without knowing of Dr. Quimby's investigations, what was the difference on percussion over the liver and over the normal lung, and he gave the same answer which Dr. Burt would give, that the pitch was higher over the liver.

The Speaker quoted from Dr. Quimby's abstract that "vesicular breathing is often of such extreme complexity as to prevent any distinct pitch," and he asked how a sound which was loud enough to be heard could be without pitch. Vesicular breathing, he thought, was low in pitch. He must disagree with Dr. Quimby again, if he said that pulmonary consolidation led to lower pitch, or that in such condition the expiratory act was accompanied by higher pitch than the inspiratory. Only within a day or two he found the contrary true in a given case, the pitch on inspiration being decidedly higher than on expiration, and another doctor with a trained ear expressed the same opinion. This, however, was reversed when the patient was instructed to take a deep inspiration, inspiration being accompanied by lower pitch than expiration. He then listened in a case of bronchitis and asthma and found inspiration higher. Even in the same case there might be variations, sometimes inspiration being higher in pitch, sometimes expiration, the explanation being that, in his opinion, pitch depended upon the force of breathing. The diagnosis in pneumonia by physical signs could only be made out at times by causing the patient to breathe deeply; so in other conditions. Even in valvular disease of the heart, the murmur would be brought out more distinctly when the circulation was proceeding vigorously.

Uniformity of Terms Desirable.—Dr. Alfred L. Loomis said that four or five years before the death of the elder Flint he invited Dr. L—— to his house to discuss uniformity of terms as applied to physical diagnosis, and both of them agreed as to the desirability of this. They did not differ as to the sounds, or certain ones, heard over the chest in health and disease. But they had not always employed the same terms. He remembered the statement made by Dr. Flint, that he did not believe we could reach in physical diagnosis of sounds that standard which had been attained to in music, and the idea was, he understood, that the laws which governed musical sounds could not be applied to the sounds over the chest in health and disease. Mr. Frank Damrosch had made the same statement, that he felt quite sure the laws of the musical note could not be applied to the sounds elicited in percussion or auscultation. The fact must be recognized, then, that every man must be to a certain extent a law unto himself in interpreting sounds in physical diagnosis. It would be delightful if one could apply the laws of physics so absolutely as Dr. Quimby had suggested. To Dr. Quimby, the demonstrations might seem perfectly satisfactory, but he, Dr. Loomis, had been educated from a different stand-point, that is, to first make one's self perfectly familiar with the normal chest-sounds on per-

cussion and auscultation, so that these would immediately come to mind when examining a chest which was diseased. He did not attempt, nor did he think it possible to explain to students just how the normal vesicular murmur was produced; nor was it important, for they could become familiar with the sound, and contrast it with the abnormal sound without such knowledge. For instance, having heard a violin he would recognize it again by its sound without any theoretical knowledge of the laws of music which it produced, yet without having heard it such theoretical knowledge would enable him to form but a very imperfect opinion of a violin.

Leaving out, then, the question of the laws of sound, there could be no doubt that on percussion over the chest-walls a sound was obtained, and that it differed according to the condition of the tissues beneath. Once having familiarized himself with the sound in health, he would know that on getting a dull sound there must be some consolidation, and the greater the consolidation the greater the dulness. If there were more air in the chest than usual, as in emphysema, there would be a different kind of sound. No man could give the exact elements of the percussion sound in emphysema, yet no man who had once recognized it could mistake it again. While one could by experience learn to recognize variations from the normal in chest sounds, yet the full significance of these would become much clearer by observations at autopsy. Returning to the question of sounds, he said men would differ on some points, owing, in some instances, to differences in the acuteness of hearing, in others perhaps to imagination or preconceived notions, etc. For instance, the late Dr. Leaming in examining cases with himself would hear pure vesicular breathing after the patient had ceased to breathe, yet Dr. Loomis could never convince himself of his own ability to do this. It would be remembered that Dr. Leaming explained such sounds as being due to changes in the pleura.

Dr. Quimby made some closing remarks.

Stated Meeting, March 2, 1893.

D. B. St. John Roosa, M.D., President, in the Chair.

Clinical Notes on the Diagnosis and Treatment of Pleurisy.—Dr. Beverley Robinson read the paper (see p. 359).

Dr. Gibson demonstrated Leiter's aspirator, an instrument made in Vienna, which was regarded by him as better and cheaper than those in ordinary use.

The Diagnosis of Pleurisy Usually Easy, but Sometimes Very Difficult.—Dr. S. S. Burt said it was true that usually the diagnosis of pleurisy with effusion was very easy, but in exceptional cases it was extremely difficult, and sometimes even the best diagnosticians were unable to say whether fluid was present. It was only by repeated examinations and comparisons of the different parts of the chest that we sometimes were able to say whether flatness in a given region or side was due to the presence of fluid beneath. With regard to pneumonia that was associated with grip, it was in many cases central, not reaching the surface; it was so in his own case. He repeated what he had said at a recent meeting, that it was only by having the patient breathe deeply that significant physical signs could be elicited. One of the most constant signs of pleurisy with a fair amount of effusion was failure to obtain vibration transmitted to the hand placed over the fluid. He did not mean to say, however, that even this was a constant sign. As to tubercular pleurisy, he knew of no way to determine this by the physical signs. Examination of the sputa taken with the history might lead us to suspect it, but he knew of no positive sign if it were a dry pleurisy. In the general diagnosis of dry pleurisy he never failed to obtain friction if the patient breathed deeply and caused the lung to move. He mentioned a case in which, owing to pain and a friction sound, two physicians made the diagnosis of pleurisy; but Dr. Burt discovered that the sound was intestinal, and proved his position by administering a dose of sulphate of magnesia which gave relief.

He knew of no way to determine absolutely the presence of pus in the pleura except by obtaining some of the fluid on aspiration. He was inclined to think that pulmonary tuberculosis would not be grafted on a pleurisy unless there were tubercles in the pleura. In the treatment of pleurisy he was not, perhaps, so strongly in favor of aspiration as was Dr. Robinson, although he had had very good results from this procedure. So that while he was not opposed to it, yet he thought many cases would get well without it. He was in the habit of waiting about two weeks before drawing off fluid, unless it were excessive. He once had a needle break off in the chest, and although it did no harm in this instance he believed it might. He had had one or two cases of empyema recover with about two aspirations, but as a rule it was best to make a free opening, although he did not believe in resecting a rib if one could get along without it. The valvular tube devised by Dr. Phelps was valuable for drainage.

Dr. Quimby, in reply to Dr. Burt's remarks, said: So far as they relate to the points at issue, I think it sufficient to refer him to those portions of my paper in which the questions raised are considered. He will find there reference to authority for physical statements, and a demonstration of my claims. I must again request recognition of the fact that this paper deals solely with questions in acousties, and that personal opinions and views are not pertinent to a scientific discussion. Nevertheless, since silence may imply acceptance of criticisms, I am forced to indicate some errors. This one statement will sufficiently exemplify all. "Tone, which means sound, is the result of vibrations, and is altogether a question of pitch; for a tone or a semitone, higher or lower, depends on a certain number of vibrations in a given time." It is difficult to imagine a more perfect illustration and proof of the pertinence of the preface to my paper. In the first use of the term "tone," it evidently must have its broadest significance, with which it does mean sound, but only because it means a sound of definite pitch and characteristic quality. It is unquestionably the result of vibrations, and the truth of this statement is not affected by the fact that these vibrations must be multiple sets of vibrations. The next clause offers a most beautiful illustration of deceptive terms. If we are to find the unexpressed subject of "is" in the first word "tone," the statement is totally erroneous, for quality is a more prominent thought in that tone than even pitch. But, although the "and" preceding this clause necessarily connects backward, the "for," introducing the following clause, as necessarily connects forward, where by simple repetition of the term "tone" apparent continuity of meaning is maintained, and suspicion averted, although there has been an instantaneous transition to the purely technical significance of the term as used to indicate musical intervals, which are simply numerical ratios of vibrations: $\frac{9}{8}$ and $\frac{10}{9}$ being the tone intervals, differing by what is called a "comma," and $\frac{16}{15}$ the semitone interval. With this "tone" as the subject of "is," the remainder of the sentence is perfectly true. It hardly seems necessary to suggest that conclusions based on such postulates are not entirely free from uncertainty. In the first preparation of this paper all these acoustic terms were considered. In the final revision that portion was omitted because I was ashamed to assume its necessity in a paper addressed to scientific men. Nor will I now admit that anything more than indifference, or carelessness causes it to appear desirable. I will say, however, that I shall not always submit in silence to having my results labelled finical refinements, or being designated myself as a pedant, for no greater cause than a moderate familiarity with the elemental definitions and principles of acoustics, so long as my treasures include memories of winter nights, long gone, spent with my father in working out the general equations of certain luminous curves, developed by reflection from vibrating tuning-forks. The sub-

ject of acoustics is, for me, something more than cold science.

I fully appreciate that common consent and convenience have justified the use of terms with a meaning that upon strict interpretation is false. Even the statements regarding the cause of pitch as given in authoritative works on acoustics are not only untrue, but their falsity is proven. As a form of auditory sensation, which pitch strictly is, it does not depend upon the number of vibrations, per unit of time, of the sound-producing body, but upon the number of times in a time unit that atmospheric pressure on our membranæ tympani, when undergoing isochronous variations as the result of material vibrations, reaches a maximum and minimum point; a condition not dependent solely on the primary vibrations. Everyone has doubtless experienced a demonstration of this fact when travelling, in hearing the rising pitch scream of an approaching locomotive whistle, and the instantaneous drop in pitch as the locomotive passes. But this factor of motion is essentially never present in practical acoustics, so that the definition of pitch by its cause in material vibrations becomes practically true and vastly more convenient. This license of convenience is similarly illustrated in the use of the term "law" as applied to physics. It is a more convenient word for general use than formula, and is not misleading so long as we remember that it signifies what is, not should be; what we must accept, not dictate.

In reply to Professor Loomis I can only express my extreme obligation for the position he has assumed in this discussion. My greatest difficulty in private discussion has been to convince gentlemen that the methods presented are not only not antagonistic, but most perfectly adjuvant to those in use at present. I am well aware that this has been due in large measure to the fact that a scientific demonstration of my position necessitated contradiction of many established and unquestioned beliefs. For only by proving the complete absence of physics from current methods was it possible to show their value as mechanical methods pure and simple, and so obtain recognition of pure physical analysis as affording a distinct method of diagnosis by itself. To have this claim so completely accepted, and the absolute independence of the two methods not only admitted but comprehensively defined, as Professor Loomis has so conclusively done by his succinct exposition of existing methods of instruction and the distinct statement that "it is not necessary to enter into the elements of sound in order to appreciate thoracic sounds," was most unexpected good fortune and leaves nothing further to be desired. Upon this basis, moreover, his demonstration of the complete independence of the stand-point from which the analytical method approaches the subject renders impossible any suspicion of antagonism, and establishes this method in a position justifying a demand for its scientific investigation as a possible source of good and an impossible source of harm. No one could have enjoyed his acquaintance for ten years, as has been my good fortune, and hesitate for an instant to give unqualified assent to any statements as to what is already possible in the way of diagnostic acumen. Yet upon one point shall I lay claim to knowledge vastly superior to his. Dr. Loomis, if I mistake not, went directly from his hospital service in Bellevue to a dispensary class, and almost as quickly returned to the hospital as physician. Both the ante- and post-mortem sources of instruction have always been at his command in unlimited quantity. Within forty-eight hours after leaving the same hospital service I was in New England, and very soon watching my shingle bait for daily bread in a place where dispensaries and post-mortems are hardly more real than hobgoblins and fairies.

Neither Dr. Loomis nor any one else devoid of the experience can ever know what a wealth of sarcasm such surroundings can develop in his words, "You must make yourselves perfectly familiar with the normal chest sounds, and afterward with those indicating disease, when from long abstinence the very thought of a patient excites the salivary glands to almost painful activity."

However slight the value of pure physics when clinical advantages are unlimited, the analytical method of physical diagnosis cannot be without interest to the mass of the profession so long as men must enter practice prepared to make physical diagnosis only by the limited clinical experience at present afforded in undergraduate work. I trust I shall not seem to exceed the limits of modesty, however, if I reaffirm my claims as to the value of this method, made after some five years' experience, when so many gentlemen have not hesitated, in private discussion, to deny absolutely my statements upon this point without even knowledge of the method, much less experience in its application.

Unusual Cases.—Dr. E. G. Janeway spoke of some of the rare conditions making the diagnosis of pleurisy difficult. He had seen two cases of pleuritic effusion over the upper lobe of the lung, there being no fluid below. Such cases were very difficult to differentiate from pneumonia. In one the diagnosis was made at autopsy, in the other during life. A very difficult condition to determine from pleurisy was occlusion of a bronchus with pneumonia. For instance, a bronchus had become occluded by the pressure of an aneurism, and a pneumonia developed in the whole lung. The points which had aided him most in diagnosis in such cases related to mensuration and the position of the heart. If it were a pneumonia and obstruction of the bronchus by an aneurism or tumor, the apex would not be displaced, and it was more likely to occur on the left side of the chest. For want of the usual signs difficulties in diagnosis also arose in cases of fibrous exudate in the pleuritic cavity, compressing the lower lobe and simulating pneumonia. Pericardial effusions sometimes caused mistakes, particularly when pressing backward on the bronchus. Pleurisy was sometimes mistaken for phthisis when the physical signs were not striking and the emaciation and sweating were marked. Difficulties in diagnosis also arose when the pleurisy and effusion belonged to the diaphragmatic surface or the pleura. The accumulation of fluid there on the right side might be mistaken for enlargement of the liver, and on the left side for enlargement of the spleen. Again, conditions below the diaphragm sometimes simulated pleurisy: for instance, an enlarged and adherent spleen, abscess of the liver or other accumulation of fluid between the liver and diaphragm. An important basis for differentiation lay in the change of percussion, auscultation, and palpation produced by deep inspiration and free expiration.

The diagnosis of the type of pleurisy was even more difficult sometimes. A patient might give a family history of tuberculosis, have a high temperature, and be very ill with pleurisy, and yet the effusion be not purulent, as one would expect to find it. This might be equally true where there was a purulent focus elsewhere in the body. A differential sign of some value was the fact that in a serous effusion the whisper extended lower than in a purulent effusion. In one case he diagnosticated by the physical symptoms serous effusion, but the house physician withdrew pus and pronounced it a case of empyema. Dr. Janeway then aspirated and drew off clear serum from the pleural cavity, and just below the diaphragm obtained pus from a liver abscess. In two cases in Bellevue the point of the aspirating-needle had broken off, in one the point came away, in the other it was not found when the patient left the hospital. He thought the fluid should be withdrawn whenever there was any danger from sudden increase. The appearance of hydropneumothorax after aspiration in pleuritic effusion did not necessarily mean that the operation had been improperly performed, or that the needle had punctured the lung. He had known it to occur from the fact that previous to the pleuritic effusion pneumothorax had existed, the development of fluid drove the air out through the lungs, then aspiration was performed, the fibrous plug dislodged, and air again escaped into the pleura. He

would stop drawing off fluid after taking away two quarts or when the patient began to feel oppressed, and aspirate again later. One should remember that fibrin in front of the needle might prevent the withdrawal of fluid when this was actually present. The dry treatment was sometimes useful and proper, giving the patient less fluid than was voided by the kidneys, yet making the blood thirsty by giving salt in capsules. Aspiration might act to some extent as acupuncture, causing resolvent irritation. In some cases of supposed tubercular pleurisy he had obtained some benefit from introducing creosote into the pleural cavity. In empyema operative procedures were well established.

The Value of a History in the Diagnosis of Pleurisy.—Dr. Alfred L. Loomis thought that in the diagnosis of pleurisy, especially in obscure cases, one should not rely on the physical signs alone, but should take into careful consideration the history of the case. The history would be of great service in judging of the nature of the pleurisy, whether acute fibrinous, acute sero-fibrinous, or acute suppurative pleurisy; also in distinguishing between pleurisy and other conditions. For example, an acute suppurative pleurisy was ushered in by a chill, high temperature, and all the concomitants of an acute infectious disease, the same as in acute pneumonia. The physical signs would distinguish between these two. Acute plastic pleurisy gave quite a different history, which readily excluded pneumonia. The value of the history was shown in cases of pulmonary consolidation from pressure of a tumor or aneurism on a bronchus, resembling pleurisy, for the consolidation developed gradually. Cases difficult of diagnosis were those of rapid and large plastic exudation, which were accompanied by the physical signs of pulmonary consolidation. The absence of fremitus was the chief reliance. The history in such cases, which later gave pleuritic effusion, often pointed toward tuberculosis. Another class of cases which had given him a good deal of trouble in diagnosis were cases of chronic circumscribed empyema. The diagnosis was apt to pass until unexpectedly the patient expectorated pus; the source of the pus might be suspected, yet unless one happened to aspirate in just the right area he might fail to secure the fluid which would confirm his opinion that a localized collection of pus in the pleura had bursted into a bronchial tube.

As a rule in the dry pleurisies, spoken of by Dr. Robinson as rheumatic or gouty, and which were quite frequent and belonged to the fibroid diathesis, the friction was extensive and readily determined the diagnosis; but when limited, considerable difficulty would be experienced. But there was a form of dry pleurisy occurring at the apex of the lung, accompanied for some time by a hacking cough, then hemorrhage would take place; such cases, he believed, were apt to be tubercular, and there was an anatomical reason for infection of the pleura, lung, or bronchial glands, when any one of these was affected, for recent histological investigations at the laboratory of the University Medical College had shown direct lymphatic communication between these parts at the apex of the lungs.

Pleurisy Classified.—Dr. R. C. M. Page said that for diagnosis and treatment of pleurisy a proper classification of the cases simplified the subject very much. He made three divisions: 1, Dry, circumscribed pleurisy; 2, pleurisy with sero-effusion; 3, suppurative pleurisy. He confined his remarks to pleurisy with sero fibrinous effusion. Here we had the acute, subacute, and chronic forms. The acute and subacute were considered together. The acute was often of rheumatic origin, or at least was often shown by autopsy not to be tubercular. But chronic pleurisy with sero-fibrinous effusion was, in his opinion, invariably of tubercular origin. The late Dr. Austin Flint had regarded double pleurisy as of tubercular origin, but Dr. Page had seen a case complicating grip in which tuberculosis was excluded at autopsy.

As to treatment of acute pleurisy with effusion, it could be considered under two heads, symptomatic and mechanical. In ordinary cases the latter might not be called for. The hot-water bag at the side might give sufficient relief from pain without anodynes, and was better than poultices or cups. Blisters were contraindicated in the acute form: but were useful in the chronic or after the acute had become subacute. Antifebrin was sometimes called for by the elevation of the temperature above 103° F. Aspiration was a serious matter, and should not be performed during the acute stage, say the first three weeks, unless imperative, for it increased the danger of adhesions. There were five conditions which not only justified aspiration, but in which it became absolutely necessary: 1, Great amount of fluid, threatening syncope from pressure; 2, when the amount of fluid was not so extensive, yet gave rise to fits of orthopnœa independent of such complication as bronchitis; 3, when the fluid occupied half a pleural cavity and showed no signs of being absorbed after a month: 4, in double pleurisies where the total amount of fluid would about fill one pleural cavity; 5, in all cases of pus.

Dr. Andrew H. Smith mentioned as one of the difficulties in the diagnosis of pleurisy, previous adhesion of the lung at some point to the chest-wall, which prevented it from rising when subsequently effusion into the pleural cavity took place; there would be the physical signs of pneumonia, but a great aid would be absence of vocal fremitus.

An Improvised Aspirator.—Dr. Smith said an aspirator which anyone could make had been first used by him during the Civil War. Take a quart bottle, a tightly fitting cork, pierce the latter with a glass tube, attach to this one end of a rubber tube and the other end to an aspirator needle. Put a drachm of ether into the bottle. Put in the stopper, set the bottle into hot water, and when the ether had become vapor, take it out of the water, introduce the aspirator needle, and as the ether condensed on becoming cool, it would form almost a complete vacuum in the bottle, so that nearly a full quart of fluid would be drawn into it.

Dr. Robinson made some closing remarks.

Special Meeting, held at the Request of the Committee of Conference with the Board of Health and the Section on Public Health, etc., of the Academy, on Thursday Evening, March 9, 1893.

Dr. D. B. St. John Roosa, President, in the Chair.

Report of an Inspection of the Croton Water-shed, with Lantern Illustrations, by Dr. T. M. Cheesman.—This report was largely devoted to the results of Dr. Cheesman's personal investigations of the sources of pollution of Tonetta Brook, which is a small stream running through the town of Brewster, and emptying into the east branch of the Croton River. With the stereopticon he showed the various sources of pollution from barnyards, vaults, garbage and refuse heaps, factories, hotels, and private residences in the neighborhood of the stream. He stated that recent legislation on this subject has had the tendency to protect the people living in the Croton basin in maintaining old nuisances, rather than the ostensible object of strengthening the hands of the city authorities in preventing pollution of the water. The threatened epidemic of cholera made it necessary to adopt energetic measures to remove or abate such nuisances as far as possible, notwithstanding the obstructive legislation. So long as sewage pollution exists on the water-shed, the Croton water must be regarded as liable to infection with germs of disease, and to become at any time an absolute danger to the public health. Experiments have demonstrated beyond peradventure that the bacteria of certain diseases do live in water, and the bacillus of typhoid fever and the spirillum of Asiatic cholera have been more than once detected in waters which were suspected of spreading these diseases. It is claimed that the process known as the self-purification of water renders a polluted water again pure and fit for domestic use. But the processes of oxi-

dation and sedimentation, which, as the most exact chemical analysis demonstrates, are capable of freeing water in lakes and running streams from the organic compounds abundant in sewage, have but little bearing upon the actual producers of infectious diseases, such as typhoid fever and cholera. These germs are living things and are not demonstrable in water by chemical methods, nor are they with any certainty removed from sewage-polluted lakes and streams within the limits which chemical experiences have led us to regard as safe. Sedimentation does remove many harmful bacteria from sewage-polluted waters. Dilution does diminish the chances to incur disease. Many individuals are, at favored times, practically invulnerable to the incursions of these tiny foes. But it is safe to say that, without purification, sewage-polluted water is not fit for men to drink, no matter how fast and how far the river runs, or how wide the lake into which the sewage drains. With the size of the lake and the volume of the river the chances of harm decrease, of course; but they stay chances still. To protect the waters used for domestic purposes, throughout this whole State, we need legislative enactment, and, what is quite as important, and without which all legislation is futile, a thorough and conscientious administration of the laws.

Report of the Legal Measures to be taken to Correct Existing Abuses in the Sanitary Condition of the Croton Water-shed by the Committee of the Section on Public Health, Legal Medicine, and Medical and Vital Statistics.—Dr. Henry D. Chapin read this report. It included a synopsis of the laws which have been enacted, bearing on the protection of the Croton Water-shed, and showed that by the law of 1890 all the previous laws on the subject had been nullified and practically all protection removed. In conclusion, he read the Webster Bill, which is at present before the Legislature. Under this law the Commissioner of Public Works is empowered to acquire for the city property abutting on the Croton River and its tributary streams and feeding lakes, to the value of $500,000 annually.

Dr. E. G. Janeway said there can be no doubt regarding the pollution of our water-supply, nor can there be any doubt as to the desirability of getting rid of this pollution. The Legislature and Governor of this State are responsible for the passage of a law which did not carry with it a measure of efficiency for the protection of the Croton Water shed. The speaker said he was opposed to the law now before the Legislature. Efficient measures can be taken to prevent the pollution of the water without the necessity of condemning and purchasing land to the extent which seems contemplated under that law, and without any such interference with private rights. The proper sanitary authorities should be entrusted with the protection of the Croton water supply, rather than the Commissioner of Public Works. The State Board of Health should have jurisdiction in this matter; they are in a position to deal with the question, not only in this county, but in other counties throughout the State as well. Legislation on this point should provide for the appointment of a commissioner of the water-shed, if necessary, with proper assistants, appointed and approved by the State Board of Health. Under the advice of a sanitary engineer, all possible sources of pollution should at once be removed or guarded against.

Dr. T. Mitchell Prudden read a paper in which he said there can be no doubt that the pollutions of the Croton Water shed are such as to justify grave apprehensions for the welfare of this city in the immediate future, if intelligent means be not at once taken to stop them. The greatest source of pollution is the sewage and waste of the towns and villages on or near the streams. If this were properly cared for, the most urgent danger would be removed.

This problem of the safe disposal of the sewage and waste from small towns and villages has been so often and so satisfactorily solved, that under the advice of competent sanitary engineers an efficient plan might be made and carried out at a comparatively small expense. It has recently been proved that filter tanks for sewage can be made at slight expense, which will remove all the harmful elements. By this plan it has been shown that ninety-four per cent. of the organic matter and ninety-eight per cent. of the bacteria, and even in some cases a higher percentage of the impurities, can be removed. This is only one plan for the disposal of sewage which would be applicable to the Croton Water-shed. There are many others. But any plan suited to the special conditions of the problem before us must be furnished by sanitary engineers. Just here we must not forget that familiarity with letters, with business, with law, with medicine, with accounts, or even with municipal politics, does not, in itself, make any man's opinion on such sanitary problems as this valuable. Nor does it justify him in assuming the functions of a sanitary expert or of a judge of what is necessary for the protection of the public health.

With a well-studied plan for the safe disposal of the sewage and waste of the towns and villages on the Croton Water-shed, and power and means to execute it; with a reasonably stringent law for the prevention of the pollution of the water by individuals and manufacturers; with an honest and efficient administrative corps in charge of inspection; and with the enforcement of law, there would be comparatively a limited necessity for acquirement of land by the city. It would be very easy indeed, Dr. Prudden said, for the taxpayers of this city to dispose of half a million dollars yearly in the purchase of real estate in the vicinity of the streams of Putnam, Westchester, and Dutchess Counties, without in any essential particular improving the condition of the Croton Water-shed.

In conclusion, the speaker said that what the city needs, in his opinion, is, first, a consistent plan, approved by sanitary experts, for the safe disposal of town and village sewage on the water-shed, and legal and financial power to carry such plans into effect. Second, such legislation as shall forbid, under compelling penalties, individual pollution of the water, and an honest and efficient enforcement of that legislation. Third, the city needs the power and means to acquire, under proper safeguards of individual rights, such real estate as may, in the minds of competent sanitary experts and engineers, be necessary to protect the water, after the sewage problem shall have been, as far as possible, solved by the more simple and effective measures which science has made known.

Dr. Janeway made a motion that Dr. Prudden's paper be considered as the sense of the meeting, and that it be transmitted to the Legislature as the Report of the New York Academy of Medicine.

Dr. L. Weber said he had spent much time in Brewster, and could confirm, from his personal knowledge, Dr. Cheesman's remarks regarding the pollution of the water of Tonetta Brook.

Charles F. Chandler, Ph.D., said that he fully indorsed the statements made by Drs. Prudden and Janeway. He regarded the Webster land-acquirement bill as a very unwise scheme for the protection of the Croton Water-shed. A carefully devised plan should be drawn up by persons who are familiar with this subject. He stated that he did not, however, think there was any immediate danger from the pollution of our Croton water-supply. While he is quite in accord with the sentiment that everything possible should be done to prevent the pollution of the water, he has had occasion to study this subject for many years, and has been compelled to adopt views regarding it which are widely at variance with those popularly held. In 1872 the Water Commissioners of the City of Albany, N. Y., were considering the question of obtaining a proper supply of water for that place, and he was sent for, and the question put to him whether it would be safe to use the water from the Hudson River. After carefully investigating the subject he was finally led to the conclusion that it was perfectly safe for them to drink the Hudson River water. He made such a report, and the Commissioners acted upon it, and the people of Albany have been drinking the water ever since. In

1889 the question of increasing the pumping facilities of that city came up, and in the meantime the theory of bacilli in drinking-water having come into vogue, he was again applied to by the Commissioners as to whether his views were changed. This led to a careful consideration of the bacteriological side of the question; after going over it carefully he made a statement to the effect that nothing had occurred to change his opinion. He has naturally watched the health reports of the city of Albany very carefully during the past twenty years, and compared them with those of Troy. Albany has a population of about one hundred thousand, and Troy, which is a few miles farther up the river, has a population of sixty thousand. The water-supply of the city of Albany is taken from the Hudson after the river has been polluted by the sewage, etc., of Troy, and still there has been less typhoid fever in Albany than in Troy. These are facts, Dr. Chandler said, which anyone can verify, and he has been led by them to the conclusion that the city of New York is not in such great danger from its water-supply as to necessitate the Academy of Medicine to lend its influence toward the passage of a bill involving the expenditure of vast sums of money.

Dr. A. Jacobi said that Dr. Chandler has given us certain facts, but he has not given us any explanation of them. The fact that there have been fewer cases of typhoid fever reported in Albany than in Troy does not prove that it is safe to drink polluted water. If the health of Albany is so much better than that of Troy, there must be some good reason for it. A single fact of this kind has no weight, because there are hundreds of instances on record where the excreta of one typhoid-fever patient emptied into a brook has resulted in a typhoid epidemic among those who afterward drank the polluted water.

Dr. Prudden said that, as the result of numerous interviews with citizens of Albany and with some of their Water Commissioners, he has been led to believe that a considerable proportion of the population of that town are very sorry indeed that they ever accepted Dr. Chandler's report. They regard their water-supply as a constant source of danger, and are doing everything in their power to get a better one.

The President said it is not a fact that Albany enjoys any immunity from typhoid fever. It is stated by the physicians of that city that the disease is prevalent there to an extraordinary degree; so much so, that many of the people have taken to drinking Apollinaris, boiled water, etc., diligently eschewing the Hudson River water.

The discussion was continued by Drs. J. West Roosevelt, Simon Baruch, A. A. Smith, Frederick A. Castle, and Charles A. Leale.

Dr. William H. Thomson offered an amendment to Dr. Janeway's motion. He said that to simply transmit Dr. Prudden's paper to the Legislature, as the sense of the Academy, would result in no good. Dr. Prudden's remarks should be embodied in the form of resolutions, and presented to the Legislature by a committee of five, to be appointed by the Chair.

Dr. Janeway accepted Dr. Thomson's amendment, and the motion was unanimously carried.

The following gentlemen were appointed by the Chair to serve on this committee: Drs. E. G. Janeway, J. W. Roosevelt, A. Jacobi, W. H. Thomson, and R. H. Derby.

Dr. Chandler said he desired to say a few words in reply to the remarks made by Dr. Jacobi and others. Before giving his opinion to the Water Commissioners of Albany, he read up all the literature on the subject in English, French, and German, particularly that relating to the supposed origin of epidemics of typhoid fever. He found that in most of these cases the statements would not bear scrutiny. A case of typhoid fever occurred, and then it was discovered that a cow had been seen in the neighborhood of the brook supplying the water. Such statements are not facts. Most of the opinions at present held regarding the origin of certain diseases are based on just such facts. Many of the leading authorities, Dr. Chandler said, are fully in accord with him on this subject. Pettenkofer, of Munich, stands in the foremost rank, and he has repudiated the idea that the typhoid fever epidemics in that city were caused by the drinking-water. In reviewing the subject, he (Pettenkofer) stated that he has failed to find any connection between such outbreaks and the water-supply. Of course, the popular idea in Albany, as elsewhere, is that typhoid fever is caused by the drinking-water, and they are naturally afraid of it. The German investigators have told us that in water charged with sewage the typhoid bacilli are destroyed in twenty-four hours. Their vitality is destroyed by the other germs present. There is a general tendency to accept theories regarding the propagation of certain diseases which has a pernicious effect on the public mind. The popular idea that scarlet fever is spread by sewer-gas does an immense amount of harm, because it prevents proper precautions in other directions. There are few people who are willing to say a good word for the Croton water, while it is always to somebody's interest to push the various brands of table-waters—Apollinaris included. Dr. Chandler said that he has long felt it his duty to stand up for our Croton water-supply. He believes that it is good water to drink, and he has no fear of the "deadly" nitrites which were recently discovered in it. All natural waters contain nitric acid; that is the final end into which the organic ingredients of the water are converted by the various fermentative processes.

The thanks of the Academy were extended to Dr. Cheesman for his paper and stereopticon views.

The following is the report of the committee:

Sir: At a special meeting of the New York Academy of Medicine, called at the request of the Section of Public Health and the Committee on Hygiene, held on the 9th inst., discussion was had concerning the imminent danger and great probability of an invasion of the city of New York by epidemic disease during the coming summer, and the alarming facility afforded for its dissemination by the unprotected condition of the Croton Watershed, the source of the city's water-supply.

It was pointed out that Asiatic cholera is at this moment actually epidemic in various parts of Europe; that the most frequent means of its transmission to these shores, as shown by the history of previous outbreaks, is foreign immigration; that the port of New York, being the principal and almost exclusive gateway of such immigration, is not only peculiarly exposed to its visitations, but is also, in a certain sense, responsible to the whole country for safeguard against its introduction; and that infection of the Croton water would carry the disease into every household in this city, and produce an epidemic which would defy every effort at suppression.

The attention of the Academy was particularly drawn to the provisions of Assembly Bill No. 233,877, entitled "An Act to provide for the sanitary protection of the sources of the water-supply of the city of New York," etc., passed by the Assembly on the 8th inst., and now under consideration, as we have been informed, by the Senate Committee on the Affairs of Cities. The principle and provisions of the bill were unanimously condemned by the Academy as quite certain to result in the expenditure of very large amounts of public money, without at all obviating the danger which threatens not only this community, but the whole Union—a danger which can be averted only by thorough and immediate scientific precautions.

As a result of the discussion, the undersigned were appointed a committee to present to the Legislature the unanimous objections of the Academy to the bill in question, and its views as to the character of the measures needed for the prompt and effective protection of the city's water-supply from pollution.

For that purpose, on behalf of the Academy, we accordingly request a public hearing before your committee, at such day during the coming week as may be most con-

venient to it, and beg to be apprised at the earliest practicable moment of the time fixed therefor.

We remain, very respectfully,

WILLIAM H. THOMSON, M.D., *Chairman.*
E. G. JANEWAY, M.D.,
A. JACOBI, M.D.,
H. D. CHAPIN, M.D.,
J. WEST ROOSEVELT, M.D., *Secretary.*

Surgical Suggestions.

Subconjunctival Application of Cocaine for Eye Operations is discussed by Dr. Kaller (*New York Medical Journal*, January 7, 1893), who says: "First I instil a few drops of a four per cent. solution and wait several minutes, after which the instillation is repeated. Now I insert the speculum and, by means of a sterilized hypodermic syringe, inject a few drops of a two per cent. solution of cocaine under the conjunctiva, next to that part of the cornea where I intend to make the section. This will be the upper part in most cases. The solution has been sterilized previously by boiling it, and the hypodermic syringe by rinsing with alcohol and then with a two per cent. carbolic acid solution. After the injection the speculum is removed, and one has to wait from five to ten minutes for the artificial œdema at the place of injection to subside, as it possibly would be in the way of the knife. If it is slow to disappear, gentle rubbing will hasten it. The anæsthesia thus attained is complete, and will contribute to diminish that percentage of prolapse of the iris that still adheres to our statistics of cataract extraction."

Otitis Media is discussed from its surgical aspects by Dr. Jack, in the *Boston Medical and Surgical Journal*. He concludes: "1. The removal of the drum membrane and ossicles is attended with little annoyance to the patient, proof of which is sufficient to warrant the performance of the operation as the only means of cure in many cases. 2. The operation often produces marked improvement of the hearing. 3. Satisfactory results may be expected toward the relief of tinnitus and vertigo. 4. The results of the operation seem to be permanent."

Braces should be left off in a tentative way in the treatment of hip disease. Trauma may cause latent tuberculosis to become active. The gait and attitude in walking and the character of the resistance of the joint to motion are the symptons which should govern the question of leaving off the brace.—SCHAFFER.

Sacral Hysterectomy, where cancer of the uterus is no longer confined to that organ, is thought by Dr. Kammerer to be better than laparotomy.

Celiotomy, for the removal of an ectopic gestation before rupture, Dr. Walsh says, is not more difficult than an ordinary ovariotomy. After rupture it is hazardous. A successful operation, under the latter condition is reported by him in the *Medical News*, November 26, 1892.

Pubeotomy.—Dr. Hirst says the technique is easy and simple. (See *Medical News*, October 15, 1892.) The operation deals a severe blow to craniotomy upon the living child. It is safer, easier, and usually quicker.

Ununited Fractures in Children, Power says, have a bad prognosis for subsequent union. The ends may be resected, but if there has been much wasting of either end this may prove useless. Fibrous union with artificial support does for the upper extremity, but not for the lower.

Excision of the Ossicula is not always free from danger. Würdemann reports a case in which vertigo and complete deafness followed and was attributed to hemorrhage into the labyrinth.

Senile Gangrene, when progressive, even in the absence of fever, gives indication for high amputation. Power says, above the condyles of the femur, when the process has reached the sole of the foot or dorsum.

Colotomy, according to Kelsey, is almost free from risk, and gives a longer length of comfortable life in cancer of the rectum than does extirpation.

Rib Excision, by means of straight bone-forceps, McIntyre says, is neither difficult nor dangerous, and should be done as soon as a pleural effusion is found to be purulent, the opening being made above the ninth rib.

Biliary Colic is thought by Frankel to depend at times upon inflammatory adhesions, and that exploratory operation is proper, as cure follows release of the adhesions, even when no calculi are found.

Fracture of Spine, operated ten hours after admission, was followed by apparent recovery at the end of two weeks, when, from restlessness of patient, lateral displacement took place, completely severing the cord. The case is reported by Lane, in *The Lancet*, November 12, 1892.

Cystotomy, by incision parallel to that advised by Poncet, passing through the right rectus muscle, where an artificial urethra and meatus are formed is described by Jaboulay, in *Le Merc. Med.*, No. 36, 1892. Six sutures close the bladder and skin walls, the muscular coat being omitted. The recta muscles seem to exert a sphincter-like action.

Fracture of the Patella, if treated by suture under favorable general conditions, Park says (*American Journal of the Medical Sciences*, December, 1892), gives better results; *i.e.*, bony union is positively obtained, while perfect motility of the joint is more probable; and the time necessary for recovery is usually halved.

Therapeutic Hints.

Hay Fever.—Dr. Kyle's plan of treatment is, he says, as follows: First, I cleansed the nasal mucous membrane with an alkaline solution. I then applied to the sensitive areas, by means of cotton pledgets, an eight per cent. cocaine-phenate solution, keeping this in contact with the parts for at least ten minutes, followed by a spray of a solution of the same strength. The result was a diminution of the hyperæsthesia, lessened congestion, and relief of the constant coryza and sneezing that are so annoying in these cases. The treatment failed to benefit the cases in which there was marked hypertrophy. I then removed the thickened membrane, and the result was a partial relief. In cases characterized by reflex asthmatic symptoms an eight per cent. spray of cocaine was used with most marked effect.—*Medical News*, December 17, 1892.

Vomiting of Pregnancy has been controlled in a case of Weil by the exhibition of about a grain of menthol, or ten drops of a twenty per cent. solution in olive-oil dropped upon finely powdered sugar.

Bright's Disease, Semmola says, as a result of forty-two years' experience, is best treated by milk, which is at the same time the typical food for this condition.

Epidermin, a semi-fluid mass made with beeswax, glycerine, and water, is a new skin application introduced by Kohn. When painted over the surface it dries rapidly, forming an elastic film which is readily washed off.

Liquor Potassæ Iodinatæ, a solution of iodide and hypiadite of potassium forming a colorless and rather alkaline fluid, from which iodine is at once set free on the addition of dilute hydrochloric acid, is mentioned in the *British Medical Journal*, December 10, 1892, as a convenient and pleasant way of administering iodine, which is liberated by the acid in the stomach.

Strophanthus has been employed by Fergusson in exophthalmic goitre with good results. The thyroid diminished as well as the exophthalmos. Eight to ten drops of the tincture were given three times daily, as mild doses produce no good effect. In some cases the dose has been carried as high as twenty or thirty drops.

Myrrholin is the name under which a solution of equal parts of myrrh in oil to which creosote is added, is known. It is employed by Dr. Kahn in phthisis, and is thought to be better borne than the creosote alone.

Tropacocaine, a powerful local analgesic much less toxic than cocaine, and more easily kept in solution, has been isolated from coca by Giesel (*Sem. Méd.*, August 31, 1892). A three per cent. solution of the hydrochlorate is recommended for eye work.

Chronic Eczema of the face is treated by some Parisian physicians by the following application, which is to be made morning and night by means of a brush:

Salicylic acid	ʒ j.
Ichthyol,	
Glycerine	āā ʒ ij.
Peppermint water,	
Lavender water	āā ʒ v.
Alcohol	ʒ jss.

Hepatic Colic is treated by Le Gendre, during the attack, with tablespoonful doses of the following, every fifteen minutes:

Glycerini	ʒ j.
Spt. chloroform	ʒ j.
Tinct. bellad.	♏xxx.
Tinct. camph. co.	♏xx.
Aq.	ʒ v.

Trional is said to induce sleep in about a quarter of an hour after from fifteen to thirty grains have been given, rarely producing giddiness or other disagreeable symptoms.

Tetronal, another new hypnotic, has been found by Ramoni inferior to trional, but superior to sulphonal or chloral, producing sleep in from thirty to sixty minutes, which lasts from six to eight hours undisturbed by dreams.

Tuberculous Cystitis is treated by Dr. Talayrach (Thèse de Bordeaux) with injections into the bladder of the following:

Iodoform	25 grams.
Glycerine	20 grams.
Gum tragacanth	0.15 centigrams.
Distilled or boiled water	5 grams.

Using a teaspoonful of the mixture to a litre of tepid water. The bladder should first be emptied and washed with a four per cent. boric solution.

Tuberculosis treated with creosote has given Dr. Stark the happiest results. He says: "The good effects of the pure beechwood creosote are to be derived not from heroic doses, but rather from a continuous and extended employment of moderate doses. It should not be our intention to creosotize the patient in the same sense that we mercurialize him in syphilis.

Benzol or benzene is but little used in medicine, but Dr. Munell gives the following formula, which he has used in influenza and in over a hundred cases of chronic bronchitis and winter cough as an expectorant and sedative:

℞. Benzol pur	ʒ jss.
Ol menth. pip.	ʒ ss.
Ol. olivæ	ad ʒ ij.

S. gtt. x—xxx, on sugar every three or four hours.

Tar Tablets containing a grain of pure tar make a convenient and practical way of giving this often very beneficial remedy in coughs.

Bromamide, a new analgesic in the form of fine needle crystals, is colorless, tasteless, odorless, and slightly soluble in cold alcohol.

Cocaine in the treatment of morphine habit, Obersteiner says, should never be used hypodermically. He gives the formula which quantity should never be exceeded for a daily dose, and the single dose should never exceed one-fifth of this:

℞. Cocaini muriat	0.5
Acid salicylat	0.1
Aq. destillat	100.0.

Correspondence.

OUR LONDON LETTER.

THYROID EXTRACTS AND POWDERS IN MYXŒDEMA—MR. LAWSON TAIT ON THE SENSITIVENESS OF THE PERITONEUM—THE MEDICAL DEFENCE UNION AND MR. TAIT—THE VIVISECTION CONTROVERSY—DOES NORMAL URINE CONTAIN SUGAR?—DR. TIBBITTS AND THE "ELECTRICAL REVIEW"—THE MEDICAL AND CHIRURGICAL SOCIETY'S ANNUAL MEETING—THE MARSHALL HALL PRIZE DEATH—OF DR. JAMES ANDERSON.

LONDON, March 4, 1893.

MYXŒDEMA continues to occupy the mind of a large number of practitioners, and congratulations on the success of the treatment by thyroid glands are exchanged at most medical gatherings. Two patients practically recovered were exhibited at the last meeting of the Medical Society. The dry extract which, as stated in a former letter of mine, had been successfully employed by Dr. A. Davies, is a great advance, inasmuch as it can be taken in powder or pill without exciting nausea or disgust. The powder was prepared for Dr. Davies by Mr. Edmund White, of St. Thomas's Hospital, by first treating with glycerine and water, acidulating the filtered liquid with phosphoric acid; then adding calcium hydrate until an alkaline reaction is obtained. The solution is filtered rapidly and the precipitate dried over sulphuric acid without heating. Three grains of the powder represent about one-eighth of a gland. Mr. White continues his investigations into the chemistry of the gland. Meantime, since he announced his progress, others are offering to supply the demand, and all sorts of preparations are being submitted to the profession. It is to be hoped that commercial enterprise will not flood the market with inferior articles.

Mr. Lawson Tait seems never to be reluctant to engage in controversy. Lately he has asserted, in opposition to the physiologists, that the human peritoneum is excessively sensitive, and offered a certain number of facts in support of his opinion, derived from the practice of abdominal surgery. His opponents think he has mistaken the pain caused in touching the skin surface of the wounds for sensitiveness of the deeper structure, and this seems to be the prevailing opinion. Another occasion of dispute touches conduct rather than surgery. Mr. Tait is President of the Medical Defence Union, and has greatly promoted the interests of that useful organization, although it may be feared that he has at last inflicted upon it a serious injury. It will be remembered that Mr. Tait was prosecuted for libel by a member of the profession, and no one was surprised at this, for no other course seemed possible. The action was defended by the Union, a course landing the organization in a deficit of £392. At the annual meeting on Wednesday last, Mr. Tait announced that when the bill of costs was received "his check-book would be ready." Then Mr. V. Horsley asked whether any, and if so, what sum had been paid by the Union in respect of Mr. Tait's injunction against the Royal College of Surgeons; whether a similar promise had been made as to such sum, and whether, if so, it had been fulfilled? The secretary replied that £75 16*s.* 1*d.* had been so paid, and that on his applying for the amount Mr. Tait had postponed payment until after the annual meeting. A further question was raised as to the possession of a brief which had been lent to the president, who

said it was given him by the solicitor, but this that gentleman denied, it not being his, but the property of the Union. A further remark by the president was flatly contradicted by the solicitor. Eventually the meeting was adjourned for two months, by which time it is to be hoped the bills of costs will have been delivered, and Mr. Tait will have fulfilled his promise to pay them; for the Union has done some good work and it would be a pity for it to be ruined. There was a secession from it a year or so ago, and another association has already been formed, but so much work is to be done in medical defence that an amalgamation would probably result in benefit to the members. Surely one strong society could do more than two weak ones.

Another subject on which Mr. Tait's utterances have been unsatisfactory is vivisection. He accepted a leading position among anti-vivisectors, and naturally drew upon himself adverse criticism. I am glad to notice that in his latest statements on this subject there seems some indication of a desire to modify his previous conclusions. It would be a good thing for his reputation if he were to give up all those controversial topics, and confine his work to that field of surgery of which he is so skilled a master.

The oft-discussed question as to whether sugar occurs in normal urine has been before the Medical and Chirurgical Society. Mr. Stillingfleet Johnson says all human urine—normal and pathological—exerts some reducing action upon cupric salts in boiling alkaline solutions, and want of familiarity with this fact has no doubt given rise to many errors. He agrees with Dr. Pavy that one-fourth of the reducing power in normal urine is due to uric acid, but he holds that normal urine is absolutely free from sugar, and that the hitherto unaccounted-for three-fourths of reducing power is due to the kreatinin present—which differs in some respects from other kreatinins.

The phenylhydrazine test proposed by Fischer, and subsequently by C. Schwartz, is relied upon by Mr. Johnson as an exceedingly delicate test which confirms his conclusion that normal human urine contains no sugar. Dr. W. Hunter was hardly disposed to accept the conclusion, as most urines contained carbo-hydrates more or less allied to glucose, and glycuronic acid, derived from certain articles of diet and drugs, *e.g.*, Borneo camphor, is a powerful reducing agent. He referred to the benzoyle chloride and the furfural tests.

Dr. Curnow said that he had been able to detect as little as one-tenth of a grain of sugar in one ounce of urine by the phenylhydrazine test, which he considered sufficiently simple for clinical purposes, and he found that the addition of urates and kreatinin did not interfere with the reaction.

Dr. Tibbitts brought an action against the *Electrical Review* for an alleged libel contained in an article commenting pungently on the so-called electropathic belts advertised most extensively by Mr. Harness. In a pamphlet sown broadcast, extolling these precious belts, Dr. Tibbitts gave an account of some experiments he had undertaken with the belts, and the writer in the *Review* said his statements exhibited "incredible ignorance of electrical laws." A number of electricians, headed by Lord Kelvin, President of the Royal Society, were called for the defence. Lord Kelvin had himself examined a belt which he declared as sold was incapable of generating any current, and other equally damaging evidence was given. The jury found for the defendants, and Dr. Tibbitts has to pay the costs. It is said that these will be met by Harness, who will also bring other actions. He and his battery company have so long shocked the profession with advertisements, that it is a wonder Dr. Tibbitts could have consented in any way to be mixed up with such a concern. Already a committee of eminent men has been formed to defend actions brought by Harness, and indemnify the proprietors of the journals who have incurred heavy costs for exposing this quackery.

The annual meeting of the Medical and Chirurgical Society was held on the 1st inst., when the president, Sir Andrew Clark, delivered the address. In it he told us that the question of federating the medical societies would probably be submitted to those concerned within a short period. This is a question often before mooted without leading to any result, although in Ireland the societies have found a solution in the Academy of Medicine, which was formed by a union of the several societies. The Marshall Hall prize was awarded by the meeting to Dr. Gowers, for his original work in relation to diseases of the nervous system. The officers for the year were elected. A part of the president's address on this occasion is always occupied with an account of those fellows who have died during the year, and no one can discharge such a duty with more grace than Sir Andrew Clark. This year the duty was peculiarly difficult, for only the day before Dr. James Anderson, his colleague and friend, had most unexpectedly died, after only two days' illness. Dr. Anderson was well known among the fellows, but very few had heard that he was not in his usual robust health, and the news of his death was quite a shock to the audience. He was only forty years of age, and after years of assiduous work at the London Hospital, at the Victoria Park Hospital, and at the Hospital for Paralysis and Epilepsy, he was just beginning to realize the fruits of his labor and his learning. He seemed never tired of work, always ready to help others, and was naturally a favorite with the students, to whom he was an example of industry and zeal. Sir Andrew Clark paid him a well-deserved eulogy, and the sad event cast a gloom over the meeting such as happily we do not often experience.

Dr. Eyton-Jones, a leading Welch practitioner who was well known in London, particularly by those who attend the British Medical Association meetings, died lately at Pau, to which he had retired, in his sixty-first year, and his wife died a few days later and was buried in the same grave at Pau. He was a fluent speaker, an earnest worker, and a genial companion.

THE BUREAU OF PUBLIC BATHS.

To the Editor of the Medical Record.

Sir: As the initiator of the free rain-bath movement, I beg to offer a few remarks on your valuable editorial on the "Bureau of Public Baths."

While in your opening sentence you grant the bill the approval it deserves, you reflect upon the propriety of the government assuming the function of cleansing the masses. This reflection is evidently based upon an erroneous conception. You say, "There can be doubt concerning the advisability of providing free baths for the poor in this city. We confess we should rather have seen the new baths established by the Society for Improving the Condition of the Poor."

These propositions would be unassailable if this society offered "free baths." On the contrary, they charge five cents a bath, and in their recent report they signify their intention to build another people's bath for $40,000, "should funds be provided," and "to set the fee for a bath at ten cents instead of five, in order to insure an income exceeding the outlay." In other words, they propose to utilize the money contributed for such a bath as an investment, the income of which is to apply to other benevolent purposes. Now, while five cents or ten cents may be a nominal sum to a hard-worked doctor, it is not a nominal sum to the laborer who has a family to bathe, or to the poor shop-girl who earns $3.50 a week. As is well said by the Honorable Goodwin Brown (*Charities Review*, January, 1893, page 151): "Little reflection is needed to show that even the small sum of five cents is too great an amount for the majority of the people who should avail themselves of the privileges of public baths. For example, a man who earns from $1 to $1.50 a day, with a family to support—this sum is not earned on the average throughout the year by day laborers—is all re-

quired for lodging and food—absolute essentials. Five cents will buy a loaf of bread, and though cleanliness is to be desired, yet the cravings of hunger must be satisfied."

You will perceive therefore, Mr. Editor, that since this society's baths are not free, and since they even propose to increase the fee, your objection to the State assuming the responsibility of preventing disease by cleansing the masses, is unwarranted by the warm support you give the plan of free baths. Far be it from me to lay one straw in the way of this grand society, whose efforts for the amelioration of poverty have been so well directed to discourage pauperism. They took up the idea of the rain-bath immediately after I presented it to their executive committee, and built the People's Bath, which will always stand as a monument to the most energetic benevolence on record. To their example will be due the establishment of the free baths, if the act becomes a law, and thus the grandest sanitary measure of the present day will owe its inauguration to this association. This would be far more creditable to it than the building of one or more baths. The lukewarmness of the average legislator in sanitary matters will induce him to grasp at any objection. For this reason I hope that the objections to legislative action on this matter of a journal whose influence on the medical lay public is so powerful may be withdrawn, and that you will in a future issue support the measure fully and eloquently.

S. Baruch, M.D.

51 West Seventieth Street.

ARTIFICIAL RESPIRATION IN ASPHYXIA NEONATORUM ONCE MORE.

To the Editor of the Medical Record.

Sir: In the Medical Record for March 11, 1893, Dr. J. Harvie Dew, in an article entitled "Establishing a New Method of Artificial Respiration in Asphyxia Neonatorum," refers rather conspicuously to myself as one who doubted the efficiency and originality of what he puts forward as his method of artificial respiration in the new-born.

As this whole subject is an exceedingly important one to the general practitioner, it cannot be without interest to show a little more fully wherein the method under consideration fails.

First, however, as to the claims to originality in this method. Dr. Dew's first mention in a public meeting of this method as one of his own discovery was in December, 1890.

Inasmuch as, practically, the same method had been exhibited publicly when I was a student, in 1875, and had been then well known, and as I had seen it practised by others and used it myself, when resident physician of the Asylum for Lying-in Women, as far back as the year 1887, I felt justified (and still feel so) in saying that what Dr. Dew claimed as a new and original method was "well known," and had been "widely practised."

That I did not err in my statement of fact as to this method not being solely original with Dr. Dew, appears from the remarks made by Dr. Grandin, at the meeting where Dr. Dew's paper was read. Dr. Grandin stated that "He had found that evening an article in the Baltimore *Medical Journal*, 1870, by Professor Harvey L. Byrd, entitled 'A Speedy Method of Resuscitation in Asphyxia Neonatorum,' which was nearly identical with that of Dr. Dew."

As Dr. Byrd's article was published just twenty years before Dr. Dew made any public claims to having discovered this method, and one year at least before he claims to have first used it, the latter's claim to being the sole or original discoverer rests on a bad foundation.

An examination of the cuts used by Professor Byrd to illustrate his method, and a comparison of these with the photographs used by Dr. Dew to explain his procedure, will at once convince any fair mind that the essential principles in these methods are identical.

True, it is claimed by Dr. Dew that his method is radically different from Drs. Byrd's and Schroeder's in two ways: 1. Dr. Dew supports the head and one shoulder by the thumb and fingers of the left hand, instead of letting the head hang down during the inspiratory motion, as is done in the Byrd or Schroeder method.

This is a most unfortunate modification, as it destroys what little effectiveness the motion for inspiration might have.

The weight of the head and shoulders, if allowed to hang, might, by acting through the muscles running to the front of the thorax (sterno-mastoid and pectoral) tend to draw the front of the thorax toward the chin, and thus increase the thoracic diameters. Dr. Dew's plan of supporting the head and one shoulder effectually prevents this tendency.

2. Dr. Dew claims that he makes traction on the child's legs with the right hand during the inspiratory movement, and in this differs from Schroeder and Byrd.

This modification is even more unfortunate than the other, as this traction makes tense the muscles on the abdomen attached to the lower ribs and sternum, and thus draws down the front of the thorax and lessens all the thoracic diameters.

Thus Dr. Dew's modification of Byrd's and Schroeder's method converts their supposed movement of inspiration into a very good expiratory motion, and we have as a result a "new method" of artificial respiration in asphyxia neonatorum that consists of two movements for expelling air from the already collapsed lungs, and none at all for introducing air.

It may be truly and with all fairness said of Dr. Dew's claim, as set forth in his essay and shown by his illustrations, that whatever is good in it is not original; and what is original is not good.

It is of far less importance, however, to dispose of the question of "originality" in all methods of this kind, than to show, once for all, that such methods are founded on a fallacy, and are not methods of artificial respiration at all when applied to new-born children.

To make this position plain three things must be clearly understood:

1. In asphyxia neonatorum the air-cells of the lungs are completely collapsed; there is as yet no thoracic cavity. There is no thoracic resiliency. Asyphyxia neonatorum thus differs from all other forms of asphyxia.

2. The first and absolutely essential thing in any method of artificial respiration in such cases is to introduce air into the lungs, as, obviously, it cannot be expelled or expired until it has been first inspired or blown in.

3. Leaving out the question of direct insufflation of air by the bellows, the only way in which air can be drawn into the lungs is by increasing the thoracic diameter—antero posterior, lateral, and vertical. The first two diameters can be increased only by raising the front of the thorax toward the subject's chin.

When this is done the ribs rotate on their articulations at the spinal column, the two diameters mentioned are enlarged, and air rushes into the thoracic cavity. The vertical diameter is increased by lowering the diaphragm. Now, to apply these principles to the so-called methods of artificial respirations under discussion. Putting the child's body into the position of exaggerated opisthotonos—the inspiratory movement in such methods—does not carry the sternum toward the chin. On the contrary, it simply pushes the spine nearer the sternum, at the same time that the abdominal muscles, made tense by the weight of the lower extremities, or more so by traction on them, draw the sternum downward and backward toward the spine; and thus the thoracic diameters are lessened instead of increased. The tense abdominal muscles at the same time push the liver up against the diaphragm and lessen even the vertical diameters of the thorax. This is more readily done as the upper half of the body is in a

horizontal position on the operator's hand, and the liver falls naturally against the diaphragm.

It thus appears that for more than twenty years the medical profession have accepted the false theory that, putting the body in the position of opisthotonos increases the thoracic diameters, and will mechanically draw air into the lungs, when, in fact, the reverse of this proposition is true.

The exposure of this fallacy does not rest upon mechanical theories alone, but on careful experiments upon cadavers. Professor F. H. Champney, Lecturer on Obstetrics at the St. George Hospital, London, carried out a series of experiments in 1881, on the cadavers of dead-born infants. He inserted a tracheotomy tube into the larynx of the child, attached a rubber tube to this, and carried the other end of the tube beneath water into one arm of a graduated manometer containing a measured quantity of air. Now, if any manipulation of the child's thorax drew part of the air from the manometer into the lungs, the water would rise in the manometer-tube to take the place of the air withdrawn, and thus indicate accurately the volume of inspired air. The results of all the experiments carried on by Dr. Champney on seventeen cadavers were briefly as follows:

The average maximum inches of rise in the column of water during each inspiratory movement of three differferent methods was: Sylvester method, 2½ inches; Schultze method, 2 inches; Schroeder's or Byrd's method, 0 inch. Not a single cubic centimetre of air could be drawn into the lungs of the dead-born child by manipulations of the body after the methods advanced by Byrd, Schroeder, and Dr. Dew. Not that alone; but when air had been introduced into the lungs, the inspiratory motion in the Schroeder or Byrd method forced some of it out and caused the column of water in the manometer-tube to fall.

Such experiments are conclusive and cannot be set aside by the flippant suggestion, in Dr. Dew's article, that the bodies must have been in a state of rigor mortis when experimented on, and therefore no just conclusion could be drawn from the experiments.

It is but fair to so eminent a man as Champney to suppose that he knew how to conduct a scientific experiment properly. His (Champney's) conclusions will be accepted by all unbiased minds, at least, until the advocates of Schroeder's method have demonstrated by experiment their falsity. It may be said then, with reason, that the so-called Byrd's or Schroeder's method of artificial respiration is founded on a mechanical fallacy, and is not a method of artificial respiration at all. Is it possible, then, that the eminent gentlemen who originated this method, and the well-known practitioners who recently recommended it so highly, on the occasion of the reading of Dr. Dew's paper, have deceived themselves all the time? Unfortunately there is no escape from such a conclusion.

But will not the use of such a method frequently restore cases of asphyxia neonatorum? To this the answer must be in the affirmative. This may be an effective method of resuscitation, while not at all a method of artificial respiration.

Not to prolong this article beyond reasonable limits, it should be more clearly understood that there are two kinds or degrees of asphyxia neonatorum: the first, the livid or blue stage, and the second, the pale stage of asphyxia.

In the first or usual form of asphyxia, artificial respiration is not absolutely necessary to restore animation. Manipulation of the child's body in a way that will stimulate the flow of blood through the heart and great blood-vessels, may be all that is required to restore vital action, and gradually bring about voluntary respiration.

Schroeder's method, and almost any other, will answer in such cases. In the second, or pale stage of asphyxia, a very much more serious problem is set. It is absolutely necessary in such cases to mechanically ventilate the lungs, and perhaps continue introducing and expelling air for an hour or two, before the functions of circulation and respiration can be established.

In such cases only the direct insufflation of air, or the use of the Sylvester or Schultze method of enlarging the thoracic diameters, or the combination of the Sylvester and Schultze methods, together with the direct insufflation of air while the child is in the bath (detailed in an article by myself published in the MEDICAL RECORD for April 9, 1892), are the only methods that up to the present time have been proven to be effective.

In cases of pale or true asphyxia Byrd's or Schultze's method is worse than useless, as it wastes valuable time in an unscientific and futile effort to introduce air into collapsed lungs.

W. E. FOREST, M.D.

101 WAVERLEY PLACE, NEW YORK.

HYPNOTISM AND CATHETERIZATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I would like to say a few words in regard to Dr. Herzog's valuable criticism on my article entitled "Hypnotism Produced by the Passage of a Urethral Sound," which was published in your issue of February 18, 1893. At the time of writing I did not have access to the "Reference Handbook of the Medical Sciences," and I am very glad to learn Dr. Dana's views on hypnotism.

In regard to syphilis inducing drowsiness, is it not probable and even possible, therefore, that a syphilitic subject is more susceptible to a hypnotic séance, although the doctor claims it was not hypnotism?

I beg to differ with Dr. Herzog in his statement, "the passage of the steel sound in cases of gleet does very often cause no pain whatsoever to the patient, as the urethral canal in such cases is in no state of acute inflammation." In the Naval Service there is much venereal practice, and I can say from my own experience that, although in cases of gleet of course there is no acute inflammation, yet the passage of a steel sound for the first time invariably causes, if not acute pain, at least great discomfort to the patient. And, as will be remembered, it was the first time the patient referred to had had a sound passed. The patient claimed there was no sexual pleasure, but of course we can only take his word for this.

It is a satisfaction to know that my article has created any interest in the medical profession, as hypnotism is becoming of so much importance at the present day.

Also I would say that "Jackey" on board a sea-going ship has little chance of attending dances, which would interfere with his keeping early hours.

Very respectfully,

ROBERT BOYD, M.D.,
Assistant Surgeon, United States Navy.

U. S. S. PHILADELPHIA, NAVY-YARD, NEW YORK,
March 18, 1892.

ACUTE INFECTIOUS PHLEGMON OF THE PHARYNX.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I read with interest a case reported by Dr. Kohn, in your issue of March 4, 1893. Of course we must believe that, in this day of advanced thinking and acting on bacteriological lines, the doctor's finger, used to express the cheesy contents of the tonsillar crypts, was perfectly aseptic. The doctor seems to be quite warm in his advocacy of this means of relieving the dysphagia incident to this disease, but to my mind it is only adding danger, as the traumatism caused by such forcible pressure as would be required to empty the crypts might easily break down nature's protecting wall, and allow specific morbific elements access to the general system by either lymph- or blood-channels.

F. H. PLUMMER, M.D.

KINGSTON, MASS., March 8, 1893.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 18, 1893.

	Cases	Deaths.
Typhus fever	10	7
Typhoid fever	25	4
Scarlet fever	153	15
Cerebro-spinal meningitis	11	9
Measles	112	3
Diphtheria	105	46
Small-pox	3	2
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

A Common Form of Backache and Its Cure.—Dr. V. R. Dorretta says in the *Medical Age:* "I desire to call the attention of physicians to a very common form of backache which is often erroneously diagnosed and hence not successfully treated. The wearing pain is really located in the kidneys. The patient is not always able to locate the source of the pain, often thinking it is in front. If it seems to be on the left side, the physician may charge it to the spleen; if on the right side, to the liver. It is often supposed to be in the groin, and I have known women to uselessly suffer much treatment for ovarian disease who really had only kidney-ache. The urine is often quite normal, but may contain an excess of urates or phosphates; as albumin is rarely observed, this disorder is functional, not organic. The following treatment is always successful; I have never known it to fail in one case: I give two or three drops of the tincture of the chloride of iron, and eight or ten drops of the sweet spirit of nitre, in a little water, half an hour before meals; and after meals a tablespoonful of the liquid galega vera. The plant *Galega vera* grows in Southern Europe; the leaves are the part used; the preparation can be procured through any wholesale druggist. Galega vera is also a most effective reconstructive, yielding better results in cases of anæmia and impaired nutrition than any preparation with which I am acquainted."

We must be allowed to express some scepticism of a mode of therapeutics which is so "invariably successful."

Some of the Therapeutic Work of the Past Year.—Arsenite of copper in anæmia, the use of atropine as a hæmostatic, and the value of camphorated oil in cases of collapse, have received attention. The administration of oxygen in various acute respiratory affections led to numerous communications; it was employed together with strychnine in pneumonia, alone in a severe case of broncho-pneumonia following influenza, and it was also recommended in asthma and in convalescence—massage, electricity, and oxygen being regarded as substitutes for change, exercise, and sea-air. Rectal antiseptic injections in epidemic influenza, and in advanced phthisis with large cavities, have once more received commendation. Phthisis has also been treated with creosote, guaiacol, camphoric acid, and cantharidinates, but increased experience with the last-named has given rise to some anxiety, owing to the frequency of consecutive albuminuria. In the treatment of vomiting, hydrochloric acid and strontium bromide have been recommended; chlorobrom has been used for sea-sickness and solanine for painful disorders of the stomach; orexin hydrochlorate has somewhat gained in favor as a stomachic and aid to digestion; salicylate of bismuth has been used in infantile diarrhœa, and lactic acid in many other forms of diarrhœa, having given good results even in phthisis. Much has been written of the value of glycerine in the treatment of hepatic colic, for which, when due to gall-stones, large doses of olive-oil have also been recommended. Thymol has been vaunted as an anthelmintic, but its range of application appears to be very restricted.—*Gior Ital. del Mal. Ven. e del Pel.*

Protection Better than Treatment.—So far as cholera is concerned, an ounce of prevention is better than twelve million pounds of cure. This is mathematically stated by Dr. H. Klemperer, who says: "One can with certainty immunize against cholera with milk or blood-serum of an animal recovered from the disease, but cure of a disease already commenced is much more difficult and requires much larger quantities of the antidote. Where 1 c.c. of a fluid is sufficient to immunize, 1,000 c.c. will be required to cure a commencing disease. If the disease has already made some progress, 100,000 c.c. will be required; and if the disease is well-advanced 100,000,000 c.c." Dr. Klemperer has immunized guinea-pigs with 0.01 c.c. of goat's milk, but he has never succeeded in curing a guinea-pig already diseased with it.

BOOKS RECEIVED.

Lectures on Mental Diseases. By H. P. Stearns, M.D. 8vo. 636 pages, illustrated. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $3.00.

Influenza. By J. Althaus, M.D. Second Edition. 12mo, 407 pages. Longmans, Green & Co., New York. Price, $2.00.

Tasty Tit-bits and Dishes Dainty. Compiled by Lady Constance Howard. 12mo, 162 pages. The Record Press, London. Price, 1*s.* 6*d.*

A Handbook of Invalid Cooking. By Mary A. Boland. 8vo. 323 pages. The Century Co., New York. Price, $2.00.

The Chronic Disorders of the Digestive Tube. By W. W. Van Valzah, M.D. 8vo. 151 pages. J. H. Vail & Co., New York.

Bryce's Pocket Practice. By C. A. Bryce, M.D. 12mo, 176 pages. The Southern Clinic, Richmond, Va.

Diseases of the Skin. By H. R. Crocker, M.D. Second Edition. 8vo. 987 pages, illustrated. P. Blakiston, Son & Co. Philadelphia, Pa. Price, $5.00.

Handbook of Insanity. By Dr. Theodore Kirchhoff. 8vo, 362 pages, illustrated. William Wood & Co., New York. Price, muslin, $2.75; flexible leather, $3.50.

Mineral Springs and Health Resorts of California. By Winslow Anderson, M.D. 8vo, 384 pages, illustrated. The Bancroft Co., San Francisco, Cal.

Handbook of Materia Medica, Pharmacy, and Therapeutics. By S. O. L. Potter, M.D. Fourth Edition. 8vo. 781 pages. P. Blakiston, Son & Co., Philadelphia, Pa. Price, $4.00.

Chemistry and Therapeutics of Uric Acid, Gravel, and Gout. By Sir William Roberts, M.D. 12mo, 136 pages. G. P. Putnam's Sons, New York. Price, $1.25.

Transactions of the American Orthopœdic Association. Sixth Session, 1892. Vol. V. 8vo, 282 pages, illustrated. William J. Dornan, Philadelphia, Pa.

The Twelve Tissue Remedies of Schussler. By William Boericke, M.D., and W. A. Dewey, M.D. 8vo, 384 pages. Boericke & Tafel, Philadelphia, Pa.

The Retrospect of Medicine. Vol. 106. July—December, 1892. Edited by James Braithwaite, M.D. 12mo, 449 pages, illustrated.

Cheyne-Stokes Respiration. By G. A. Gibson, M.D. 8vo, 133 pages. Oliver & Boyd, Edinburgh. Price, 5*s.*

Proceedings of the Philadelphia County Medical Society. Vol. XIII. Session, 1892. L. H. Adler, Jr., M.D. Editor. Philadelphia, Pa.

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Original Articles.

VAGINAL EXTIRPATION OF THE UTERUS—FORTY CONSECUTIVE CASES.[1]

BY JOSEPH EASTMAN, M.D., LL.D.,

INDIANAPOLIS, IND.,

LATE PROFESSOR OF ANATOMY AND NOW PROFESSOR OF DISEASES OF WOMEN AND ABDOMINAL SURGERY, COLLEGE OF PHYSICIANS AND SURGEONS.

THE lines of sound surgical principles converge toward perfection of technique in operating and the ideal operation. The proximity to the ideality of an operation is in direct ratio to the simplicity of its technique and the results obtained. Ideal results are best secured by ideal operators, with ideal surroundings, with ideal atmospheric conditions, upon ideal patients. That no large number of patients could be found equally able to withstand the shock of a formidable operation is a fact well known to the surgeon. The other conditions can nearly always be secured. The great Dudley, of Kentucky, used to keep his patients under observation, and treat them with a view to bringing them up to the best standard attainable, and it is doubtful if his record has been equalled. "Knowledge comes, but wisdom lingers." So countless methods of performing ovariotomy have come and gone, while the operation as done by McDowell is in almost every particular identical with that made by the successful operator of to-day. Sims, by establishing a private hospital in his door-yard and perfecting a definite technique, placed the cure of loathsome fistula among the precious gifts with which the surgery of the century has blessed womankind. There was wisdom of rare quality displayed in the management of their cases and the technique of their operations—surgical wisdom that will stand as such when this century of surgical triumphs shall have closed; yea, when many centuries shall have rolled on to the eternal past. The sound surgical principles they enunciated in requiring the women to come to their homes where they could have the personal attention of the operators, are bearing fruit; for patterning after their surgical ideas the successful specialists of the civilized world are now requiring that patients needing gynecic surgery shall leave their homes and have the work done at the specially equipped hospital of the surgeon. These remarks are for the purpose of fixing in the minds of the profession the fact that vaginal extirpation of the uterus is opening the peritoneal cavity, and that in this operation the lines of surgical effort must converge to, and not diverge from, such care of patients, perfection of technique, and simplicity in operating, as has given such phenomenal results in opening that great lymph sac above the pubes.

It is true that a given operator may persist in performing a faulty operation until he attains measurable success. The wise operator, however, will exchange his method for one which reason teaches him is more perfect. The operation which I here describe comes, in my judgment, as near parrying criticism as any with which I am familiar.

Position of Patient.—In my last thirty-six operations I have placed my patient in the Sims position, using the ordinary Sims speculum with a short but wide beak. I have found what is to my mind a decided advantage in the use of this position over that of placing the patient upon the back, and am surprised that eminent operators who favor the Trendelenburg position, because the intestines and omentum are retracted from the field of operating, do not avail themselves of the Sims position in vaginal hysterectomy for the same reason.

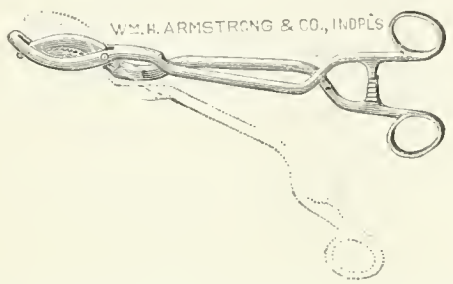
Aseptic Precautions.—Even when the uterus is not cancerous extreme precautions must be taken, otherwise the peritoneal cavity will become infected. It is vastly more difficult to thoroughly cleanse the vagina of all poisonous secretions, including the interior of the uterus, than to clean the abdominal wall sufficient for a safe abdominal section. After the vagina and cervix have been thoroughly cleaned, our manipulation may cause to pour out from the cervix secretions that are poisonous, thus endangering infection of the peritoneum. During the five days preceding the operation I use repeated vaginal irrigations, using large quantities of soft soap and soft water, the soft soap being made of potash and olive-oil by a chemist. The vagina is thoroughly scrubbed with a mop made of coarse gauze, or with a brush. Following these, irrigations with soft warm water are used, with a Hildebrand's douche, to get the benefit of running water. At the time of operation the cervix is cauterized freely through the internal os with an iron poker heated in the fire. The cervix is then packed with a bit of gauze saturated in a solution of the persulphate of iron. The external os is then stitched with three or more stitches so arranged as to secure inversion of the lips. If the uterus is cancerous and the cervix ulcerated, these precautions are not, in my judgment, sufficient. I do not think that sufficient antiseptic precautions can be taken at one sitting. Therefore after curetting I continue the antiseptic irrigation for at least one week. While using the anæsthetic twice is objectionable, a possibility of septicæmia is infinitely more objectionable. In such cases I use, under an anæsthetic, a curette, removing all necrotic tissue as completely as possible. Then thoroughly washing the parts with very hot water, packing the cervix and fundus, if I have curetted the same, with gauze saturated with a solution of Churchill's tincture of iodine, I also scrub the upper portion of the vagina with the same solution and pack it with cotton. This is removed in two days, sooner if necessary. The irrigations with soap and water are continued until from a week to ten days has elapsed. During this time the patient has been taking full doses of strychnia or nux vomica, combined with iron, precisely as in all my cases where I expect to open the peritoneal cavity. Then I venture upon the extirpation in the following manner: Emptying the bladder with a catheter at the last moment, carefully mopping the parts again in the region of the urethra, casting out of the work any sponges or mops that have been used for cleansing purposes, the parts are seized with two tenacula, one catching the cervix and the other the mucous membrane in front of it. These are given to assistants. Then with scissors curved on the flat I make a semicircular incision through the mucous membrane, clipping my way with tenacula and scissors between bladder and uterus[1] until the peritoneal cavity is open. The serous membrane is then brought down over the bladder and stitched to the mucous margin. The angles of the incision are widened as far as the broad ligaments. In each angle a stitch is taken which holds the serous to the mucous membranes. A large flat sponge, with ligature attached, is carried through into the abdominal cavity and left there to pro-

[1] Read before Mitchel Medical Society, December 3, 1892.

[1] The mucous membrane may be removed at some distance from the cervix, if we go to the cervix immediately beneath it.

tect intestines and omentum from atmospheric contact. Douglas's cul-de-sac is then opened by an incision, the angles of which unite with those which have just been stitched. The uterus is then simply attached by its broad ligament. A strong ligature is then carried around the broad ligaments with a blunt hooked needle, the point of which is kept close to the uterus as it is inserted. The

needle is withdrawn and the ligature tied. This brings the broad ligament to a round mass. The staff grooved on its concave surface is then passed through the anterior incision, following the track of the ligature, its point emerging in the posterior incision. By this staff the now rounded broad ligament, not the uterus, is brought down



where a single clamp may be applied in a safe and definite way. Or the ligaments may be tranfixed with three or four ligatures without repeatedly introducing the fingers to keep your needle from catching up what is not wanted. I can see no advantage whatever in dragging down the uterus. There is surely less room in the vulva

than higher up. I can see advantage in dragging down and fixing with the staff, in a definite way, the ligament which we wish to make secure against hemorrhage. This is repeated upon the opposite side and the uterus extracted, when it will be found that the stumps of the ligaments are well down in the vagina, and a stitch which first gathers up the serous membrane near the bladder, then gathers the serous covering of broad ligament above the first rounding ligature, then catches the serous membrane of the posterior incision, when tightened, will fix the broad ligament out into the vagina. The opposite side being treated in a similar manner leaves the serous membranes touching each other between the stumps. The advantages of this method are several. First, there is nothing, not even a stitch, left within the peritoneal cavity. If an abscess should form in the broad ligament, as is sometimes the case, the pus pours out into the vagina. If the ureter has been severed, we have a definite cicatrix, and the urine will be poured into the vagina. One of the greatest advantages, however, in fixation of the broad ligaments in the upper angle of the wound is that it drags up the vagina and secures the patient against prolapse of that tube, with its resultant cystocele and rectocele, which followed in all my cases before I took this precaution to first round the broad ligaments and so fix them as to drag the vagina upward.

Early Diagnosis.—The vital point in connection with this operation which is now offering hope to those heretofore hopeless women, is an early detection of any tendency toward malignant disease of the uterus. This is forcibly impressed upon my mind almost daily by cases coming to me where the disease has extended beyond the perimetrium, so that it often seems to me that a few months' earlier diagnosis and vaginal extirpation of the uterus might have given a hope. Others where the uterus, pelvic tissue, and organs have become so incorporated in one common mass that nothing surgical could be thought of. If vaginal extirpation is advisable at all, doubtless there was a time in these far-advanced cases when an operation would have offered some hope. One of the greatest obstacles in the way of early diagnosis and early operating is the time-honored but accursed heresy that the woman must have hemorrhage, purulent discharge, pain, emaciation, etc., all attributable to the menopause. Whereas, if a woman at the age when she might expect the approach, the climax, or termination of the menopause, has any other symptoms whatever than a painless, odorless, and harmless cessation of her flow, an expert ought to be consulted and the cause of this deviation from the symptomless cessation of her menstruation determined. Professor William Goodell, of Pennsylvania, has recently, in his forcible and inimitable way, called attention to the great advantages of an early diagnosis in such cases. Another heresy being taught the laity by some members of the profession, and in some of the text-books, is that uterine cancer could not exist without pain. Some three cases, however, have come under my observation where there was not one particle of pain during two years of the progress of the disease, nor, in one case, until an excavation in the uterus large enough to contain the fist had been formed. So if we are to detect disease early we must ignore the idea that pain is an essential factor in the diagnosis.

I append to this paper a list comprising forty cases of vaginal extirpation of the uterus with four primary deaths. In the fifth case the death was within three days after the operation, but the patient was already insane, and after the second day no medication whatever could keep her in bed, she dying the third day from cerebral exhaustion. I do not think the death of a raving maniac should be counted as figuring for or against an operation which is on trial as a sort of new gospel (good news) for a class of women to which medical science heretofore could not even offer a respite from death from a most torturing, filthy, and loathsome disease.

Primary Deaths.—Case I.—Mrs. C——: patient nearly dead of hemorrhage. Duration of disease nearly two years. Dr. Long, of Indianapolis, attending physician.

Case II.—Mrs. G——; operation June, 1889. Broad ligaments contained a cancerous mass. Disease had existed over two years. Dr. Bunell, attending physician.

Case III.—Mrs. M——; operation September, 1890. Septicæmia the third day. Disease had existed over two years. Dr. A. L. Wilson, of Indianapolis, reference physician.

Case IV.—Mrs. D——; operation November 29, 1891. Nearly exsanguineous from hemorrhage. Disease had existed over two years. Dr. Records, of Lawrence, attending physician.

Non-surgical Cause.—Case V.—Mrs. B——; operation November 3, 1891. Patient died from acute mania. Dr. Bence, of Greencastle, attending physician.

In Cases I. and II. the disease was far advanced into the broad ligaments and the operation should never have been undertaken. The cases, however, were deceptive, and proved during the operation to be worse than I had anticipated. Other cases have turned out better than my former examination had led me to hope. The third case in this primary list was extremely anæmic from having lost great quantities of blood. The fourth case had suffered from the disease over two years; had lost enormous quantities of blood. Notwithstanding this, I believe she could have lived a few months could I have first curetted the uterus so as to have stopped the hemorrhage, then built up new blood, and later removed the uterus. She was too feeble, however, to be removed to my private hospital, and at that time I had not become convinced that a period of time, at least a week, should elapse between the time of removing the necrotic tissue and the opening of the peritoneal cavity. This is a principle connected with this operation which I shall insist upon in the future, to wit: That the cavity of

the uterus and the vagina shall be, if possible, rendered as thoroughly aseptic as the abdominal surface when the peritoneal cavity is to be opened.

Secondary Results.—This list comprises thirteen cases that have died since the extirpation of the uterus at different periods. That the profession may have the opinions direct from the doctors who trusted me to make these operations, I sent out the following questions:

"To the end that the profession may know the real advantages of, and benefits derived from, vaginal hysterectomy, will you be kind enough to answer the following questions and return the same to me:

1. "How long did Mrs. —— live after the operation was performed? 2. From what you know of this case, and of cases where no operation was made, did she derive sufficient benefit, prolongation of life, etc., from the operation to justify you in advising similar operations? 3. Was the latter part of her life attended with more or less suffering than those who go down and die where the uterus is not removed? 4. Have you any thought or suggestion to add as to the advisability or non-advisability of the operation?"

The answers show that two of the cases died, the one from grippe and the other from peritonitis, and up to the time of death there had been no return of the disease, leaving eleven cases that died from return of cancer.

Case I.—Of secondary death, Mrs. G——. Dr. E. E. Carey, of Indianapolis, in answer to my circular letter says: "The operation on Mrs. G—— was a success as regards removing the uterine cancer, and had the operation been made sooner I think the patient would have entirely recovered. If I had the same case to deal with, would advise the operation of entire removal of the uterus."

Case II.—Mrs. M——, died sometime after operation. I do not know who her physician was.

Case III.—Mrs. A——, of Greencastle. Her attending physician answered the list of questions in my circular letter as follows: "1. Eighteen months. 2. I think not. 3. About the same. 4. None whatever. I am willing to leave the advisability of surgical interference to those whose observations and experience enables them to decide more intelligibly of the propriety of the operation than can be done by the general practitioner.

"Respectfully,

"G. C. Smythe."

Case IV.—Mrs. C——. Dr. Carey, of Indianapolis, attending physician, writes: "Mrs. C——, after being operated upon for entire removal of the uterus made a good and rapid recovery and gained in weight thirty-five pounds in five weeks. The patient told me herself that she felt better than she had for years. She died fourteen months after the operation. Death was from uræmia, caused by the damming back of water in the right ureter. If I had the same case, or one similar, should advise the same operation."

Case V.—Mrs. S——. Attending physician answered the list of questions in my circular letter as follows: "1. About one year. 2. Yes, the pain was infinitely less, and the offensive discharge a trifle to what usually accompanies cases without operation. 3. The result in this case was eminently satisfactory to me, and consoling to the friends. 4. I would advise operations in every case practicable as the best palliative and the only treatment that gives promise of suspending the disease, and certain to prevent that offensive discharge which is so mortifying to the poor victim and friends. Having followed several cases down the dreary road of non-interference, I would advise all to avoid that road regardless of the prospect of suspension of disease or prolongation of life.

"Cordially,

"J. M. Gray.

"Noblesville, Ind."

Case VI.—Mrs. F——, Goshen, Ind. Attending physician answered the list of questions as follows: "1. I think Mrs. F—— lived about ten months after the operation. 2. As to the prolongation of her life, I feel that the operation did not shorten her life, and from what I have seen of others who did not have an operation performed, her suffering was less than those, and I would advise an operation every time. If success was only one in a thousand it would be advisable. 3. I think the latter part of her life was attended with less suffering than those who have no operation performed. 4. As above stated, I would advise an operation every time, as there is a chance of life a longer period, as I have seen those who have had the uterus removed twelve or fifteen years and are at this time in good health, otherwise death would have ensued in a few months.

"Kindly yours,

"W. W. Wickham."

Case VII.—Mrs. L——, Pendleton, Ind. Attending physician answered the list of questions as follows: "1. Patient lived about eighteen weeks. 2. Her life was prolonged fully one-half. 3. Less suffering. 4. Mrs. L—— lived at least two months longer, picked up in flesh and strength so as to go about: suffered much less pain. Discharge was much less offensive when it did occur.

"Respectfully,

"John W. Cook.

Case VIII.—Mrs. U. W——, Midleton, Ind. No report. I hear she died of peritonitis from exposure. Dr. Murray was her physician.

Case IX.—Mrs. B——, Carlisle, Ind. Attending physician answered the list of questions as follows: "1. About six weeks. 2. Yes, but would urge an early operation in all such cases. 3. There was much less suffering in her case than those who are not operated upon. 4. Would always advise as early operations in these cases as possible. If you could have had the case and operated when I first wrote you, at the time when you were absent in Europe, I am confident that Mrs. B—— would have been a living and well woman to-day.

"Fraternally yours,

"J. M. Mathes."

Case X.—Mrs. F——, Indianapolis. Attending physician answered the questions as follows: "1. Not quite two years. 2. Yes. 3. Very much less.

"William H. Thomas, M.D."

Case XI.—Miss R——, Kokomo, Ind. Attending physician answered the list of questions as follows: "1. Twelve months after operation. 2. Yes. 3. Less suffering, less odor, and less pain. 4. I approve of the operation. Had Miss R—— submitted to the operation when first suggested to her, I believe she would have been living. Early operations in cancer of the uterus is the treatment.

"I am, truly yours,

"William Scott."

Case XII.—Mrs. F——, Bloomington Ind. Attending physician answered the list of questions as follows: "1. Ten months. 2. Yes. 3. Less. 4. It should have been made sooner.

"Respectfully yours,

"L. T. Lowden."

With reference to the same case Dr. Harris answers as follows: "1. Died December 8, 1891. (Operation was performed February 3, 1891.) 2. Yes. 3. Less. 4. An early diagnosis of malignant disease of the cervix, followed by an early operation (vaginal hysterectomy) is the only safety to the patient. In further advanced cases, even before systemic infection, an operation is advisable, as it no doubt prolongs life and lessens suffering.

"Yours sincerely,

"John E. Harris."

Case XIII.—Mrs. M——, Indianapolis, Ind. Attending physician answered the list of questions as follows: "1. Something over one year. 2. She did. 3. With much less. 4. I should most assuredly advise the operation. In my judgment Mrs. M—— died of la grippe. This I believe to be the direct cause of her death. She was at my office two days before she was attacked with the above disease, and said to me that she was in better health than she had been for four years. She had become very fleshy and very well indeed. Her husband said to me to-day that he believed the operation was a success, and that if she had not taken la grippe she would have been alive to-day.

"Very respectfully yours,

"W. C. Hall."

From the ten replies to my circular letter it will be seen that the doctors (with but one exception, and in that case Dr. Smythe leaves such questions to the specialist) are emphatic in their statements that these patients all derived sufficient benefit from the operation to warrant them in recommending it in similar cases. Answering the second question—was the latter part of her life attended with more or less suffering than those who go down and die where the uterus is not removed—their answers are nearly all emphatic that their sufferings are less and that they are greatly benefited by the operation for the relief from hemorrhages and the foul discharge. Answering the fourth question, as to whether they have any thought or suggestion to add as to the advisability or non-advisability of the operation, most of them insist that the earliest possible diagnosis and vaginal extirpation of the uterus is the treatment in all cases where cancer is diagnosticated.

Patients Living.

No.	Patients.	Date of operation.	Attending physician.
1	Mrs. H . . .	June, 1888	Dr. William Scott, Kokomo, Ind.
2	Mrs. B.....	June 22, 1889	Dr. Wright, Kokomo, Ind.
3	Mrs. B.....	November 5, 1889 ...	Dr. Winans, Muncie, Ind.
4	Mrs. K	February 5, 1891 ..	Dr. Phinney, Muncie, Ind.
5	Mrs. J.... ..	March 21, 1891.....	Dr. Shields, Muncie, Ind.
6	Mrs. L.... ...	April 4, 1891	Dr. Waterman, Indianapolis, Ind.
7	Mrs. B.....	May 23, 1891	Dr. Kerns, Greenwood, Ind.
8	Mrs. B.....	May 26, 1891.....	Dr. Bence, Greencastle, Ind.
9	Mrs. M	October 6, 1891	Dr. Eastman, Indianapolis, Ind.
10	Mrs. M.... ...	October 6, 1891	Dr. Miller, Lebanon, Ind.
11	Mrs. H.....	November 12, 1891 .	Dr. Eastman, Indianapolis, Ind.
12	Mrs. T.... ..	November 19, 1891 ..	Dr. Newcomer, Tipton, Ind.
13	Mrs. M	December 16, 1891 .	Dr. Earp, Indianapolis, Ind.[1]
14	Mrs. A..... .	February 13, 1892.	Dr. Cooper.
15	Mrs. H.... ...	February 27, 1892. .	Dr. Lutz, Indianapolis, Ind.[1]
16	Mrs. Z..	June 30, 1892	Dr. Eastman, Indianapolis, Ind.
17	Mrs. M.....	September 8, 1892. .	Dr. Banker, Columbus, Ind.
18	Mrs. R	September 15, 1892.	Dr. Simeon Martin, N. Salem, Ind.
19	Mrs. D.....	September 27, 1892.	Dr. Thorne, Kokomo, Ind.
20	Miss H.....	October 12, 1892	Dr. Good, Warren, Ind.
21	Mrs. H.....	November 5, 1892 ...	Dr. Johnson, Kokomo, Ind.
22	Mrs. M. ...	November 22, 1892 ..	Dr. G. R. Green, Muncie, Ind.

There is another class of cases in women who have passed the change of life and have irritating discharges from the endometrium. Curetting produces growths varying in size. The microscope often denies that the disease is malignant. For these cases I believe vaginal hysterectomy to be the most satisfactory treatment. Still another class of cases with uterine prolapse, or with extreme retroversion, who have worn all sorts of harness and supports and find life a burden in consequence of the continued uterine displacement. In such cases I believe vaginal hysterectomy is to be the treatment of the future. There is still another class of cases of hystero-neurosis, some of them bordering on epilepsy, others on the border line between sanity and insanity.[1] I believe to them vaginal hysterectomy would offer a hope of cure of both body and mind.

This operation will always be one very difficult of performance, and ought not to be undertaken by one who is not so situated that he will probably make the operation several times. I believe a high rate of mortality will follow the first efforts of most operators. The nimble wit in the ends of the fingers which enables the operator to avoid bladder, ureters, and bowels, is possessed by the few. This is to be considered. A large number of the patients demanding vaginal hysterectomy for cancer have repeated hemorrhages until they are very anæmic. There has been more or less absorption of the putrefactive product of necrotic tissue, poisoning the nerve-cells, and so vitiating the little stock of nerve force stored away in these citadels of life, that there is little left for the purpose of resisting shock. In other words, cancer saps the fountain of life and leaves its pitiful victims with but little stamina for successful surgical battle.

Corner of Delaware and Vermont Streets.

[1] I have two such cases cured.

MEDICAL NOTES ON THE CASE OF PRESIDENT LINCOLN.

By CHARLES SABIN TAFT, M.D.,

NEW YORK.

The President was shot while sitting in a box in Ford's Theatre, Washington, D. C., April 14, 1865. At that time the writer was a medical officer of the army stationed in Washington, and (visiting the theatre on the night of the assassination) was one of the first to respond to the call for a surgeon. When I first saw Mr. Lincoln he was lying upon the floor of the stage box. His coat and vest had been removed by Dr. Charles A. Leale, whose prompt action in immediately placing the patient in a recumbent position, undoubtedly averted an immediate fatal termination from syncope. The wound was found just behind the left ear, but at that time there was no oozing from it. By direction of the surgeons the patient was removed to a bed in a room opposite the theatre. The motion of the body in being carried caused oozing from the wound, and my hands, which supported the head, were covered with blood and brain tissue when the dying President was laid upon the bed.

I gave him a tablespoonful of brandy and water, which was swallowed with some difficulty. The entire anterior surface of the body was covered with sinapisms.

About twenty-five minutes after the President was removed to the bed, Surgeon-General Barnes and Dr. Robert King Stone, the family physician, arrived and took charge of the case. At Dr. Stone's suggestion I administered another spoonful of diluted brandy, but as it was not swallowed, no further attempt was made.

The patient was entirely unconscious and breathing heavily, with an occasional sigh.

About thirty minutes after the President was placed on the bed, discoloration from effusion began in the internal canthus of the right eye, which became rapidly discolored and swollen, with great protrusion of the eye.

About 11.30 P.M., twitching of the facial muscles of the left side set in, and continued some fifteen or twenty minutes, and the mouth was drawn slightly to the same side.

The wound continued to discharge blood and brain tissue until 5.30 A.M., when it ceased entirely, the head in the meantime being supported in such a position as to facilitate the discharge of the wound and in keeping the orifice free from coagulum. I had charge of the head during almost the entire night. While the wound was discharging freely the respiration was comparatively easy, but the moment the discharge was arrested from any cause, it became at once labored. It was almost remarkable to observe the great difference in the character of the pulse whenever the orifice of the wound was freed from coagulum, thus relieving, in a measure, the compression. This fact will also account for the fluctuations in the pulse, as given in the subjoined notes.

About 2 A.M., an ordinary silver probe was introduced into the wound by the Surgeon-General. It met with an obstruction about three inches from the external orifice, which was decided to be the plug of bone driven in from the skull, and lodged in the track of the ball. The probe

passed by this obstruction, but was too short to follow the track the whole length. A long Nélaton probe was then obtained and passed into the wound for a distance of two inches beyond the plug of bone, when the ball was distinctly felt; passing beyond this, the fragments of the orbital plate of the left orbit were felt. The ball made no mark upon the porcelain tip, and was afterward found to be exceedingly hard lead.

Some difference of opinion existed as to the exact position of the ball, but the autopsy confirmed the correctness of the diagnosis upon first exploration. No further attempt was made to explore the wound. The injury was pronounced mortal. After the cessation of the bleeding, the respiration was stertorous up to the last breath, which was drawn at twenty-one minutes and fifty-five seconds past seven; the heart did not cease to beat until twenty-two minutes, and ten seconds after seven. My hand was upon the heart, and my eye on the watch of the Surgeon-General, who was standing by my side, with his finger upon the carotid.

The decubitus during the whole time was dorsal, and the position on the bed diagonal; the length of the bedstead not admitting of any other position. The respiration during the last thirty minutes was characterized by occasional intermissions; no respiration being made for nearly a minute, but by a convulsive effort air would gain admission to the lungs, when regular, though stertorous, respiration would go on for some seconds, to be followed by another period of perfect repose.

The vitality exhibited by Mr. Lincoln was remarkable. It was the opinion of the surgeons in attendance that most patients would have died in two hours from the reception of such an injury; yet Mr. Lincoln lived from 10.30 P.M. until 7.22 A.M.

The following observations of the pulse and respiration were noted down by Dr. A. F. A. King, of Washington, at the bedside, and are correct. The pulse was counted by Dr. Leale: 10.55 P.M., 48. 11.06 P.M., 45. 11.18 P.M., 42, and weaker. 11.24 P.M., respirations 27 per minute; breathing quiet. 11.26 P.M., irregular; intermits occasionally. 11.30 P.M., 45; respiration more frequent and vigorous. 11.32 P.M., 45, stronger; respiration much more strong and stertorous. 11.37 P.M., 48; respiration again silent and more feeble. 11.40 P.M., 45. 11.43 P.M., 45; respiration stertorous. 11.47 P.M., 45; respiration, 24, stertorous. 11.56 P.M., 48, weaker. 12.10 A.M., 48, irregularly intermittent. 12.18 A.M., 48, same character. 12.27 A.M., 54; and 12.28 A.M., 60. 12.29 A.M., 66, intermittent. 12.38 A.M., 66. 12.45 P.M., 69, intermittent. 12.49 A.M., 84; respiration, 28. 12.56 A.M., 66. 1.00 A.M., 100. 1.15 A.M., 92. 1.30 A.M., 95. 2.10 A.M., 60; respiration, 34. 2.19 A.M., 58. 2.32 A.M., 54. 2.37 A.M., 48. 2.54 A.M., 48, much weaker, more thready; respirations feeble. 4.18 A.M., 60; respiration, 27, strong and stertorous. 5.40 A.M., 64, thready; respiration, 27. 6.10 A.M., 60, hardly perceptible (Barnes); respirations, 26, stertorous. 6.25 A.M., thready, not counted; respiration, 22; inspirations jerking. 6.40 A.M., inspirations short and feeble; expirations prolonged and groaning; a deep, softly sonorous, cooing sound at the end of each expiration, audible to bystanders. 6.45 A.M., respiration uneasy, choking, and grunting; lower jaw relaxed; mouth open; a minute without a breath; face getting dark. 6.59 A.M., breathes again, a little more at intervals; another long pause. 7.00 A.M., still breathing, at long pauses. 7.22 A.M., died. At 1 P.M. spasmodic contractions of the muscles came on, causing pronation of the forearms; the pectoral muscles seemed to be fixed, the breath was held during the spasm, and a sudden and forcible expiration immediately succeeded it. At about the same time both pupils became widely dilated, and remained so until death.

Autopsy, five hours after death: Present, Surgeon-General Barnes, Colonel Crane, Dr. Stone, Assistant Surgeons Woodward, Curtis, Notson, and Taft.

The calvaria was removed, the brain exposed, and sliced down to the track of the ball, which was plainly indicated by a line of coagulated blood extending from the external wound in the occipital bone, obliquely across from the left to the right, through the brain to the anterior lobe of the cerebrum, immediately behind the right orbit. The surface of the right hemisphere was covered with coagulated blood. After removing the brain from the cranium the ball dropped from its lodgement in the anterior lobe. A small piece of the ball, evidently cut off in its passage through the occipital bone, was previously taken out of the track, about four inches from the external wound. The hole made through the occipital bone was as clearly cut as if done with a punch.

The point of entrance was one inch to the left of the longitudinal sinus, and opening into the lateral sinus. The ball was flattened, convex on both sides, and evidently moulded by hand in a Derringer pistol mould, as indicated by the ridged surface left by the nippers in clipping off the neck.

The orbital plates of both orbits were the seats of comminuted fracture, the fragments being forced inward, and the dura mater covering them remaining uninjured. The double fracture was decided to have been caused by *contre-coup*. The plug of bone, driven in from the occipital bone, was found in the track of the ball, about three inches from the external wound, proving the correctness of the opinion advanced by the Surgeon-General and Dr. Stone, as to its nature at the exploration of the wound before death.

THE EFFECT OF EDUCATION ON THE AMERICAN INDIAN.

By FRED. TREON, M.D.,

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THE education of the Indians of our country has received, within the past few years, much attention. There has been a steady increase in the appropriations made by Congress each year, until they have grown from $20,000 to $2,291,650 for educational purposes alone. These enormous amounts have met with much opposition on the part of certain Congressmen, who have steadfastly maintained that it was a waste of public money to attempt to educate the Indian; but there has certainly been a rapid growth during the past three years in favor of educating, not a few, but all of the Indian youths, and to do this large appropriations are required. Secretary Noble, in his report, says: "There has been an increase of over thirteen per cent. in attendance of Indian children in the schools, the total for 1892 being 19,793 scholars."

In the very outstart I wish to state that I shall endeavor to treat this subject with fairness, and it may be well to say also that if I err it will probably be on the side of education; in other words, I am so strongly in favor of education that I may be influenced by my opinions to treat with liberality some things that may appear detrimental to health.

If education, as is claimed by some, is the cause of much suffering among the Indians and tends to the ultimate extermination of the race, then it would appear best to leave them alone in their wild untutored condition. But is this true? To Christianize is to enlighten, and is not that to educate? It is unfair to suppose that education alone is responsible for the present status of the Indian's health, and particularly is the idea erroneous that he is more liable to disease when confined under proper conditions to school work than he is in his home. If it were possible for the Indian to go back to his primitive habits and customs, or if he could be advanced far enough in civilization to overcome his present harmful methods of living—then the argument might have a basis. Let us see what his present habits are, and, first of all, let us look into his home and see what his surroundings are. Quoting from my article (read before the Dakota Medical Society, June, 1889), I state: "In their houses we find but little or no ventilation; the family cook, eat, and sleep in one room. In this room are crowded a half

dozen or more men, women, and children. Around the room hangs plenty of green beef, upon which the flies may light and deposit their quota of living germs, to be taken into the stomachs of these people. You will also find in this illy-ventilated, overcrowded, filthy room a half-dozen or more dogs, and frequently as many more squealing puppies with their eyes not open. The beds are positively too filthy to describe, usually a wooden bedstead is used, with too scanty bedclothing, were it not for the fact that the inmates seldom remove their clothing upon going to bed; and when they arise ablution is rarely, if ever, performed."

Dr. J. B. Graham, in a very able article (read before the Dakota Medical Society, June, 1889), entitled "Scrofula Among the Sioux," says, describing their homes: "A log cabin, with dirt floor, which is plastered till almost air-tight. Light is admitted through a single window, without any ventilation whatever. These houses are kept in winter at a temperature from 80 to 90° F., and inside are practically dry at all times. Exhalations from persons and dogs, with sputa from consumption and pus from scrofulous sores, are allowed to lodge on the walls and dirt floors. They are rapidly dried by the high temperature and suspended in the atmosphere of the room. Thus it may be seen that these houses are the very gravest source of danger. Veritable culture-soils and hot-beds, they furnish the best possible conditions for the spread of tuberculosis when the bacilli lodge in the soil prepared for them by exposure, underfeeding, and malnutrition. Not only is death lurking in the air of these places, but as the raw beef, sliced, is hung there to dry in winter, tubercle bacilli, or spores, may lodge on the beef, and, as this is often eaten raw, another most formidable source of danger to others and of self-infection presents itself."

Dr. A. B. Holder in an article, "Diseases Among the Indians," published in the MEDICAL RECORD for August, 1892, says: "Forty houses built for Indians of this (the Crow) reservation by Government contract are each a single room 16 × 18 × 8 feet, with double, dirt-filled walls, dirt roof, one door, and one window of a single fixed sash. The condition within in winter is well described by Dr. N. McKay Douglass, of the Santee Agency, Nebraska (1887): 'Visits to their domicile at this time of the year impress me deeply. Mercury is below zero, wind blowing a gale, snow drifting high when I knock at the door for admission. In a tight little Government house I find all the cats, dogs, babies, and other members of several families congregated and unengaged, save in smoking, talking, and sleeping. Dogs fare equally with the human occupants. The windows are closed, and these people and animals are breathing in an atmosphere which has been polluted by exhalations from disintegrating lung-tissue and the emanations from open sores.' I find such houses often occupied by fifteen or twenty persons, and heated by two stoves, the smoke exit being a tight flue; open fireplaces, of such value in ventilation of small houses being unknown."

The Indian is no longer an independent being. He is, in fact, most dependent, and the question of greatest importance for the Government is how to elevate him out of his physical and moral degradation and place him upon an equal footing with his white brethren. I maintain that the day is near when an indulgent people will demand that Congress stop these enormous appropriations. To foster idleness is certainly unwarranted, yes, unjust to the Indians—it is simply encouraging them to continue to live in an atmosphere that is killing them off by rapid degrees. They cannot, however, be forced all at once out of this deplorable state.

Now, having described the condition of the Indians and shown their surroundings with liability to disease, let us see what the effect of education is upon them. To do this it will not be necessary for me to do more than examine the records for the past six years, or during the time I myself have been in the Indian Service. At Crow Creek, where I have been stationed the greater part of the time since 1886, not a death has occurred in the school, notwithstanding the fact that it has been visited by a number of epidemics, among them malignant measles, pneumonia, influenza, whooping-cough, and a few cases of scarlet fever. During that period six children have died after leaving the school, all from tuberculosis. At the Grace Mission school there has not been a death; at the Roman Catholic Mission school, also located on this reservation, where over one hundred children have been almost constantly in attendance, only three have died, and those from complications arising from la grippe. At the Lower Brule School, with which I have had somewhat to do, four deaths have occurred in six years. How does this compare with the same number of cases in camp or the Indian's home? I believe that the Crow Creek Reservation will compare favorably with other reservations. Let us, therefore see what the mortality has been for the past six and a half years. I find the sanitary reports show three hundred and fourteen deaths from the following causes:

MORTUARY.

Tuberculous diseases	175
Miasmatic diseases	68
Enthetic diseases	2
Diathetic diseases	2
Diseases of nervous system	14
" organs of circulation	4
" organs of respiration	20
" organs of digestion	6
" urinary organs	3
" skin	1
Obstetrical	2
Suicides and violent deaths	9
Unknown causes	8
Total	314

Compare the following: In 1887 there were treated 195 cases of measles in camp, 13 deaths, or 1 death in every 15 cases occurring—a mortality of nearly seven per cent. During the same period there were 130 cases treated in the schools—deaths, none.

In 1889 and 1890 there was an epidemic of influenza; there were treated in round numbers, in camp, 124 cases, with 12 deaths, or a mortality of nearly ten per cent.; there were 73 cases in the Crow Creek boarding-school, no deaths. At the Roman Catholic Mission there were 100 cases treated, with 3 deaths, a mortality of but three per cent. In the spring of 1890 an epidemic of whooping-cough prevailed; in camp, 117 cases were treated, with 17 deaths, a mortality of about fourteen and a half per cent.; in the schools there were 83 cases, no deaths. During the year 1892 there were 9 cases of scarlet fever treated in the schools, no deaths. Last fall there was a malignant form of diarrhœa prevailing in Indian homes on this reserve: in the months of August, September, and October, 31 cases were treated, among which there were 7 deaths; while in the schools, where there are now 135 children, not a single case occurred.

Another gratifying observation is that five years ago nearly one-half of the children enrolled were troubled with scrofulous sores, whereas now only a few are afflicted with that malady, a fact due, no doubt, to the improved diet and sanitary surroundings of the school over that of the home life.

School Buildings.—This is a matter of the greatest importance and must necessarily exert an influence upon the health of the pupils. Too much care cannot be exercised in selecting the site for school buildings. There should be in every boarding-school separate apartments for the children, and rooms arranged to accommodate two single beds. To each room there should be a door and window; the door leading into a large hall. The danger of infection where children sleep promiscuously in dormitories, or even two in a bed, must be apparent. The recitation-rooms should have high ceilings, be light and well ventilated.

In every Indian school there should be properly equipped bath-rooms, a well-appointed gymnasium, and,

last, there should be a well-furnished kitchen, with a well-lighted dining-room. In addition to the school buildings proper there should be a hospital, to which the children can be removed when sick.

The buildings used by the Government are often of an inferior kind, and not infrequently inadequate for the number they are required to accommodate. I am led to believe that often children are ill when in school from overcrowded sleeping-rooms, bad ventilation, poor diet, and a lack of proper drainage. This was certainly true at San Carlos, Ariz., where there were nearly fifty girls crowded into a miserable one-story dormitory that could not have been more that 16 by 40, with a ceiling of 9 feet. I have gone into that place on a hot night in June, when, I am sure, the Black Hole of Calcutta could not have smelt fouler. If the system of educating the Indian youths is to be carried out successfully by the Government, proper buildings must be had. It is not right to take these untutored people, frequently unaccustomed to being housed, and shut them up in miserably constructed boarding-schools. They not only break down but the system under such condition becomes a miserable failure.

It is hardly fair to say that they have better accommodations than at home. In their homes they have perfect freedom of mind and thought. It is the mental strain that tells soonest on them. Then, too, one of the main advantages to be gained in an education is to help them change their present harmful methods of living. The school should be a model home, in other words, an object lesson that will create within them a desire for a better home life.

The Indian youth when brought under the influence of schools undergoes a radical change—much of the sullen diffidence is laid aside and a cheerful, happy disposition, soon develops. Up to the age of twelve or fourteen they learn rapidly, and considering that they must lay aside the mother tongue and acquire the use of a language of which many of the sounds are exceedingly difficult for them to get, particularly the palatals, they do remarkably well. After they reach that age, however, education proves a task, and they soon tire or fall behind. Whenever an Indian is placed in a position where he must think for himself and assume mental responsibility he soon sickens and breaks down under the strain. Education, for this reason, should not be pushed in the individual too fast, and the greatest care should be exercised in the plan of educating. I felt obliged recently to make the following special report of the management of the Crow Creek boarding-school:[1] "The buildings, I am now surely convinced, are crowded too much, and the school-room work overdone. The children have a tired, haggard look. The hours for school-room exercises have been increased and the children placed under a high mental tension that will sooner or later break them down physically. To suppose that these children, who are physically weak and unaccustomed to mental study or worry, can stand as much or more than white children is too serious a mistake to be overlooked. Particularly do I find the night session, as it is now conducted, objectionable—where the same exercises are held for three-quarters of an hour. Little children not yet six years old are under the trying lamp-light straining their weak eyes, and so overcome with mental fatigue as to go to sleep in their seats. I appeal to the Department, in the name of humanity, won't you please designate just what is meant by Rule 38 in 'Rules for Indian Schools?' These children should have a time for relaxation; if they have it education will prove beneficial, without it they will surely break down and the system of educating the Indian youths of our country prove a miserable failure. . . . I have spoken to the agent and find that he feels as I do regarding the night sessions; but as the rule above referred to appears to authorize the same he feels powerless to correct the existing evil. I can hardly believe that the rule is to be construed into the meaning that each teacher shall hold a session in their respective school-rooms. If only the larger children were required to attend night-school where the programme was of such a nature as to remove the restraint of the day's exercise and made attractive, relaxation would be secured, and good result from the same. I feel confident if this plan was pursued there would be fewer runaways, the school materially benefited, as well as a preventive for sickness established."

[1] Sanitary Report for October, 1892.

Where these children can be best educated, and with the least detriment to health, has, I fear, not always entered into the question. When I entered upon my duties as agency physician nearly the first thing I was called upon to do was to examine some children for Hampton. Prior to that time I think it was the understanding that if the children were willing to go that settled it. I found it necessary to report those I examined unfit to go. The Rev. Mr. Gravatte, who was here, expressed himself well satisfied and did not take them. After that I refused to recommend any children for school who could not pass a satisfactory physical examination, and have ever adhered to it, except in a single instance where great personal influence was brought to bear in favor of allowing a returned student to go back. What has been the result? The death-rate at Hampton has fallen from about eight per cent. in 1885 to about one per cent. for the year 1892.

It must be remembered that the change in the climate when taken from here to Hampton, Carlisle, or Philadelphia is marked, and as the tendency to lung trouble is very general among this people it is clear that many of them cannot stand the change. I am more and more convinced that Eastern schools should be a reward of merit for those who have advanced sufficiently to deserve a higher education. The becoming accustomed in their native climate to school and school work is certainly very desirable before the children are sent East. If an Indian youth has passed through the Reservation school, and is physically able, I think it well that he be given a higher education. I am glad to note that Hampton, a school that has unquestionably done good work, is coming to recognize this fact, and I hope the day is not far distant when all Indian pupils in Eastern schools will be scholars who have made suitable proficiency in Reservation schools, and who have earned a scholarship. Following I give a table, imperfect, though taken from the Commissioner's Annual Report. I feel very much on this subject as Dr. A. B. Holder expresses it on page 178 of the MEDICAL RECORD for August 13, 1892: "I have endeavored to accumulate statistics bearing on this point, but they are not so full nor accurate as to enable me to make a safe deduction."

	Died, 1886.	Enrolled.	Died, 1887.	Enrolled.	Died, 1888.	Enrolled.	Died, 1889.	Enrolled.	Died, 1890.	Enrolled.	Died, 1891.	Enrolled.
Albuquerque, N. M.	..	.	2	170	1	178	3	180	3	150	1	200
Carlisle, Pa.	11	604	7	642	21	637	18	702	10	769	10	984
Chilocco, Ind. Ter.	1	204	10	215	3	n g	5	154	5	n g	4	180
Fort Stevenson, Dak.	..	.	1	87	..	113	7	134	2	112	1	120
Fort Yuma, Cal.	..	..	.	..	4	131	7	n g	3	n g	9	143
Genoa, Neb.	1	166	3	205	2	170	3	180	1	250	4	n g
Grand Junction, Col.	..	..	.	..	..	56	1	27	..	n g	..	96
Lawrence, Kan.	12	434	6	400	13	505	6	382	5	n g	6	531
Kearns Cañon, Ariz.	..	..	..		1	52	1	n g		n g	1	100
Salem, Ore.	..	..	5	202	7	244	3	n g	4	180	4	n g
Schools on the Crow Creek and Lower Brule Reservation.												
Crow Creek Boarding-school	..	60	..	65	..	88		90	.	96		120
Lower Brule Boarding-school	..	30	..	35	..	5	1	60	.	60	3	62
Immaculate Conception Boarding-school	..	..	..	50	.	100	3	118		110	.	115
Grace Mission Boarding-school	..	..	..	.	.	5		10	..	17	.	22

Out of 77 children sent to Hampton since that school has opened to Indian pupils, 24 have died, 10 at Hampton and 14 after being sent home. What occasions the difference in mortality at the above-named schools? I answer the cause is due to several things: First, the difference in the locality. Second, a lack of carefulness on the

part of agency physicians in their examinations. This brings to mind what I heard of an agency physician, who, when asked to examine a candidate, said to the child, as he felt his pulse, "Let me see your tongue," then replied he guessed it was all right. Third, the indiscriminate taking of children who have never been in school, and confining them to the school-room work in a climate that is trying to their constitutions, while forcing them to give up their homes all at once naturally causes them to become despondent. It is all very well to argue that they are better off and more comfortable—but those things do not make an Indian child happy. A home, or the thought that a home is near enough to be visited, even though it be a humble, miserable, Indian tepee, is still home, because father and mother are there; and if the children are properly taught on the Reservation, they soon begin to make alterations and changes in the home and home life, and so gradually that the influence does not disturb the old, yet is surely felt and observed. On the other hand, children that are taken away when young and kept until they have entered upon manhood and womanhood come back, and they must and do come back, only to find things so different from what they had in the East as to render them utterly wretched and discontented, and any attempt at a radical change in their old homes simply meets with ridicule from the parents and ultimate failure. As a result they too often strike out on a middle course and fall into vice and crime.

In concluding this article I wish to say that all Indian children of school age should be required to pass a physical examination, and all who are able should be placed in school as early as five years of age. It is not right to educate a few and neglect the many. Accommodations for every Indian child should be provided on the Reservation first, or in the immediate vicinity. As they advance let them be transferred to higher schools, and when physically able let them be sent East. The solution of the Indian problem, the health of the people, and the future prosperity of the race all depend upon the education of the rising generation. The work will not be accomplished in a year, or any given number of years, but constant perseverance in properly constructed and well-located buildings, together with carefully selected teachers who are adapted to this peculiar work, will do much toward bringing about the desired end. Commissioner of Indian Affairs, General T. J. Morgan, has recognized the importance of an education for all of the Indian children, and has immortalized his name by his untiring devotion to this cause. He has already seen grand results; but the best we hope is yet to follow, when in after years we say, "He built more wisely than he thought."

This is perhaps the first Reservation to put all children of school age into schools. Acting upon rules published by the Indian Office I have examined every child between the ages of five and eighteen, and now have a complete record of each child, its physical condition, when examined, and where sent to school, or if not able to attend any school the fact is shown. In round numbers we have three hundred children of school age; out of that number two hundred and seventy-five are in school, while the remainder are exempt on account of physical disability. The children are all doing very good work, are fairly healthy, and the plan works well. What has been done on the Crow Creek Reservation can, I feel sure, be accomplished at other agencies.

Mr. Herbert Welsh said recently, in an article published in the *Church Standard*: "The Government's duty in the care of its Indian wards is first to provide for their education, in the broadest sense of that term—education which will develop them morally, mentally, and physically—so as to fit them for the hard, practical duties and trials of life, which involve foremost among these self-support."

The sooner all Indian youths are placed in school, the sooner will the Indians be able to rid themselves of much sickness and be able to support themselves, and the sooner will the solution of the Indian problem be reached.

OPERATIVE RELIEF FOR DEFORMITY AFTER POTT'S FRACTURE.

By GEORGE F. SHRADY, M.D.,

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Although there are several methods for correcting the deformity occasioned by faulty union after Pott's fracture of the fibula, I venture to offer the following case as a suggestive contribution to the subject.

The patient was a male, weighing over two hundred pounds and aged twenty-two, who sustained a severe and complicated form of injury to the ankle by the giving way of a trap-door over a flight of stairs. The fracture was

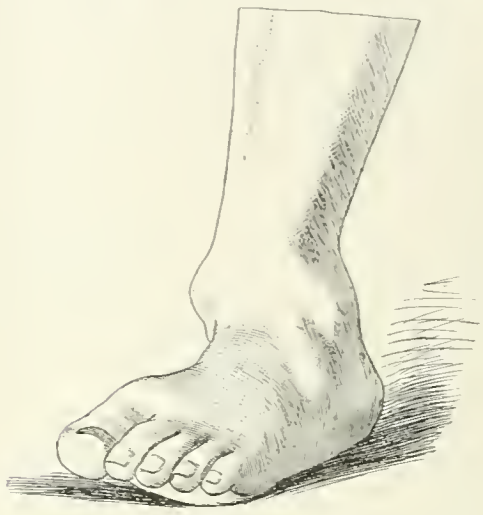

Fig. 1.

compound in character, and, although treated by another practitioner in a neighboring hospital, eventually resulted in the deformity as exhibited in the cut (Fig. 1).

There was dislocation of the foot outward and backward, so that the anterior and lower margin of tibia rested upon the neck of the astragalus. The inner malleolus, fractured transversely and displaced downward and forward, occupied the site of the head of the astragalus, and at first gave the impression that the latter was partially

Fig. 2.

dislocated inward. The fibula was fractured in the usual position, the distal fragment being ununited and deflected toward the tibia.

For two years thereafter the foot was practically useless on account of pain in his attempt at walking, and from the additional mechanical disability of bearing his weight upon the perpendicular axis of the limb. For the purpose of obtaining relief from these difficulties he consulted me.

The deformity was so extreme that at first I was disin-

clined to promise anything from a radical operation. The joint was free, it is true, but the amount of surrounding consolidation was so great, the axis of deflection so extreme, that I concluded to devise a method that would apply to the particular case.

After carefully considering the anatomical relations of the parts, it seemed impossible to replace the foot save by making a resection of the joint. But desiring to avoid a necessarily anchylosed condition, I determined, if possible, to leave the articulating surface of the astragalus undisturbed, and trust to the formation of a new joint, even against the odds of having a sawn surface of bone resting for a time against articular cartilage.

Before resorting to this expedient, however, I resolved to try forcible reduction, with the bare possibility of succeeding. To this end a thick and heavily padded splint was bound to the inner aspect of the leg from the knee to the inner ankle. The limb was then laid upon its outer aspect, the foot with its outward deflection hanging downward over the edge of the operating-table.

A thickly padded loop of strap was then passed around the outer and lower aspect of the overhanging foot, and through a lever, the fulcrum of which was the inner and upper aspect of the splint. In this way an immense force was used to lift the foot into what should be its proper axis. This failed. I then, with the concurrence of Drs. Gibney, Ridlon, Ripley, and Powers, who were present at the operation, resected the lower portion of the tibia, and also the lower and ununited fragment of the fibula. The fragment of internal malleolus was found in the place already designated. The bone was sawn through *in situ* in the usual manner, with the least possible injury to the soft parts. This was in great part due to the use of the subcutaneous saw. The periosteum was preserved and its deeper attachments carefully dissected. The astragalus was not disturbed. The tendo Achillis was divided: the sawn plane surface of the tibia was placed in contact with the articular surface of the astragalus, through drainage of the joint established, antiseptic dressings applied, and the foot and ankle were enveloped in a plaster splint including the knee-joint and thigh.

It was found necessary, on account of softening of the splint from oozing, to replace it and reapply dressings on the fifth day. The drainage-tube was then withdrawn and a permanent fenestrated plaster splint applied. The wound healed without suppuration. The plaster splint was worn for three months, after which passive motion was occasionally employed. At the end of five months the new joint was apparently perfectly formed, the tissues consolidated, and he could bear his weight upon the limb without pain and move the joint voluntarily.

Considering the weight of the patient, it was not deemed advisable to leave the limb without support, and Dr. Gibney applied a stirruped and hinged ankle support for three months longer. When last seen, nine months after the operation, he had good motion of his joint, and was able to walk upon it without assistance of cane or brace, but as he was given occasionally to sprees he was advised to wear the brace a while longer to guard against extraordinary chances.

The result of the operation in restoring the conformity of the foot is shown in Fig. 2.

8 East Sixty-sixth Street.

Statistics Relating to the Population of France for 1891.—The report of M. Lax, director of the Office du Travail, has just been sent to the Minister of Commerce. From this report it appears that there were registered during 1891, in the whole of France, 285,458 marriages, 5,752 divorces, 866,377 births, and 876,882 deaths. Compared with the figures of 1890 there is an increase of 16,126 marriages, 295 divorces, 28,318 births, and 377 deaths. The number of deaths has remained virtually constant, the marriages have increased six per cent. and the births 3.37 per cent. The deaths exceeded the births by 10,505. The general rate of mortality was 22.6 per 1,000, which is not a particularly high rate.

EMPYEMA OF THE MAXILLARY SINUS AND ITS RELATION TO DISEASES OF THE ANTRUM OF HIGHMORE.[1]

By MOREAU R. BROWN, M.D.,

PROFESSOR OF RHINOLOGY AND LARYNGOLOGY IN THE CHICAGO POLYCLINIC.

My apology for presenting a thesis on this much hackneyed theme is the fact that the past year has been fruitful of more progress in this particular line of study than at any previous time. We are only beginning to clear up some of the many occult pathological conditions which have been overlooked in the past. To be the better enabled to substantiate my arguments for the proper treatment and the better understanding of antral diseases I will introduce my subject by a brief sketch of the anatomy of the maxillary sinus.

Anatomy.—The superior maxillary sinus, or antrum of Highmore, is an irregular pyramidal cavity. The walls

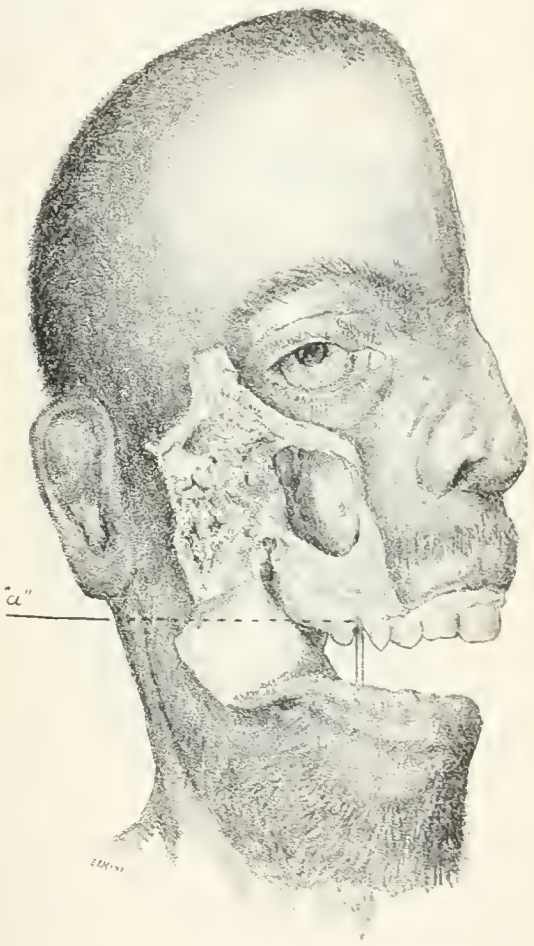

Fig. 1.

are quite thin and correspond to the facial, zygomatic, and orbital surfaces. The base is directed to the nasal side and the apex extends into the malar process of the superior maxilla. The lateral walls correspond to the orbital cavity and lateral plates of the superior maxilla. Its base or inner wall, which separates it from the nasal cavity, consists of a portion of the superior maxilla, palate, inferior turbinated and unciform process of the ethmoid. The opening which communicates with the nasal fossa is closed in the normal state to a considerable extent by the unciform process of the ethmoid, palate, and the inferior turbinated bones, reduced by the pituitary mucous membrane to one or two small apertures.

On post-mortem examinations we frequently find bony projections and laminæ similar to those in the cranial sinuses, sometimes dividing the cavity into compartments more or less complete, being both transverse and perpen-

[1] Presented to the American Laryngological Association, June 16, 1892, as a candidate's thesis.

dicular (see Fig. 2, "*a*"). The floor is more or less irregular, being, according to Reschreiter, always below the level of the floor of the nasal cavity in men, which fact was corroborated in a number of sections made by me, being assisted by my associate, Dr. J. F. Oaks, to whom I am indebted for the beautiful sections from which the accompanying photographs were prepared, in which we found the same fact to hold good in the female as well as in the male skull (see Fig. 2). There are seen conical eminences corresponding to the roots of the teeth in this situation (see Fig. 2 "*a*." corresponding to the first and second molars). In some instances the floor of the sinus is perforated by the dental roots in this situation. Examination of a number of cadavers disclosed a pretty uniform thinness of the antral walls, more especially the orbital surface, which explains the tendency to exophthalmos and orbital abscess, where there is obstruction to the escape of pus from the ostium. We also found, in five out of twelve antra examined, disseminated and aggregated cysts studding the mucosa, usually of the floor and apex, varying in size from three to six millimetres in diameter (see Fig. 1, "*a*"). Capacity varies greatly; it is relatively small in the young and larger in the adult. It varies much on the two sides (see Fig. 2). We found as a result of a number of measurements of adult antra the maximum capacity to be 10 c.c. or 3.75 drachms, the minimum 8.5 c.c. or 2.5 drachms, making an average capacity of 11.75 c.c. or 2.87 drachms.

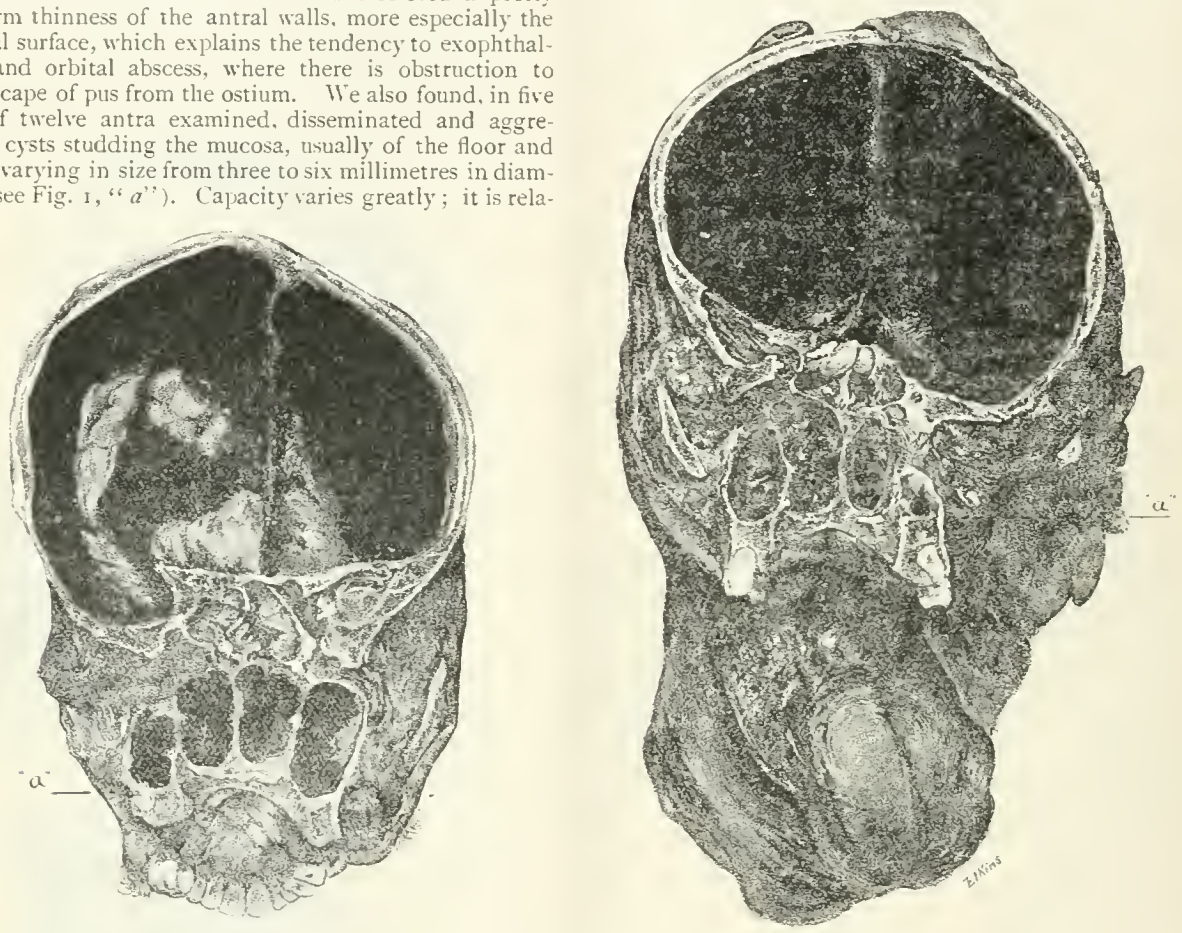

Fig. 2.

Etiology.—Opinion has been nearly equally divided as to the relative frequency with which empyema of the maxillary sinus is dependent upon dental periostitis and intra-nasal disorders. Dentists claim that the majority of cases observed by them are due to diseased teeth, while rhinologists of late consider intra-nasal diseases as a very prominent etiological factor.

In a report of twenty cases, presented to the Illinois State Medical Society, on May 8, 1890, I assigned a very prominent position in the list of causes to the condition commonly known as "catching cold." More extended observation has but served to strengthen me in this opinion. The mucosa of the maxillary sinus becomes inflamed, the inflammatory exudate is retained by closure of the ostium from hyperæmia and infiltration of the mucosa, the exudate degenerates into pus, as described by Bosworth.

The following synopsis of a case taken from my notebook illustrates this condition. Mr. X——, after exposure on a cold, windy day, was confined to the house with a severe pain in the left cheek, simulating neuralgia. In a few days a discharge of fetid pus set in from the nasal cavity of the affected side. This was followed by partial stenosis due to turgescence of the inferior turbinal, which was not present at the outset of the illness.

The inference in this case seems legitimate, that the inflammation of the mucosa of the maxillary sinus was primary to, and independent of, if not causative to, the inflammation of the nasal mucous membrane. A claim might be made that the antral trouble had overshadowed the nasal disturbance in the beginning. That, however, is refuted by the fact that in other similar cases a careful examination in the early stages disclosed no acute disorder of the nasal cavities.

As other causes of antral diseases I will briefly mention stenosis, or closure of the ostium maxillare by intranasal tumors, traumatism, extension of catarrhal inflammation from the nasal and accessory cavities, suppurative degeneration of cysts, dentigerous cysts, owing to error of development and eruption of teeth, epidemic furunculosis, scorbutus, mercurialism, infection (erysipelas and the exanthemata), foreign bodies (teeth), papillary and polypoid degeneration of the mucosa, polypi extending into or taking their origin from the margin of the ostium, neoplasms, and la grippe.

Symptomatology.—The literature of antral disease in pre-rhinoscopic times is a very meagre one. The classical symptom was distention, with more or less marked exophthalmos and nasal stenosis on the affected side. Since 1886, Ziem and others have added much to the study of antral disease with its many and various subjective and objective symptoms. As to the first-mentioned symptom, distention, it is rare, except in those cases where there is complete obstruction to the exit of the pathological contents by the normal ostium, absence of the usual communication with the other accessory sinuses, or in the presence of a neoplasm or cystic tumor (Virchow).

The more common symptoms of antral disease are, viz.: 1. Pain, referable to the cheek, of a neuralgic character, with a sense of fulness and sometimes pressure in the direction of the orbital cavity. 2. Odontalgia, with tenderness of teeth on pressure and over canine fossa. 3. Distention, if there be stenosis of the ostium, and consequent retention of pus, with intra-orbital and supra-orbital neuralgia, or diplopia. 4. Purulent discharge from the nose, periodic in character, free from odor or fœtor, unilateral or bilateral. 5. Boyer, of Brussels, has called attention to the more free discharge of pus by holding the head downward and leaning forward. 6. Link, of Lemberg, claims to have found a new diagnostic sign in the palpation of the hard palate. 7. McBride, of Edinburgh, has directed attention to a "marked redness of the gingival mucous membrane corresponding to the affected side." 8. Anterior rhinoscopy discloses pus in one or both nares, of a thick, yellow, and creamy nature, which can often be demonstrated by Boyer's position to come from between the middle and inferior turbinals or middle meatus in the vicinity of the ostium maxillare.

In the so-called latent form, where the disease is insidious and of slow evolution, there may be an entire absence of symptoms in the earlier stage, or the symptoms are quite mild. The individual imagines he has taken cold and experiences but little pain. He seeks relief chiefly from the rather free discharge which necessitates the troublesome use of handkerchiefs, and perhaps for an uncomfortable feeling of partial occlusion of the nasal passage. The formation of pus may be preceded by slight rigors. Several of my patients complained of mental disturbances, of being incapacitated of exercising mental powers; a feeling (quoting the expression of the patients) "as if they were losing their mind." One man forgot entirely within a few hours things which in his ordinary physical condition would have been strongly impressed on his mind; another developed a sudden impulse to suicide.

Diagnosis.—There has been of late much speculation in reference to the diagnosis of diseases of the maxillary sinus. The attention of the workers in this comparatively new field has been especially directed to one of the more constant symptoms or objective phenomena, viz., a purulent discharge by way of the normal or accessory openings of the sinus into the nasal cavity, or an artificial opening made by one of the methods of exploratory puncture. We may have all the classical symptoms of disease of the maxillary sinus, and yet no presence of pus, or, as Rualt puts it (when he was disappointed by not finding pus in a case where translumination showed a beautiful suborbital umbra), "We can have opacity without empyema, but we cannot have empyema without opacity." Pus in the maxillary sinus may be the result of an acute, subacute, or chronic inflammatory or suppurative process, due to extension from the nasal or accessory cavities, alveolar caries, or pyorrhœa. It may owe its presence to the fact that, being on a lower level with the nose and other cavities, it becomes a receptacle of pus formed in the nose or the accessory sinuses to the retention of the normal secretions, from occlusion of the ostium maxillare, which, according to Bosworth, invariably degenerates into pus, etc. We must therefore demur to the emphatic statement of Garretson, that "diseases of the maxillary sinus are for the most part simple and easy of diagnosis." We are rather inclined at the present time to voice the statement of Greville MacDonald when he says that the diagnosis of antral diseases is one of the most difficult points in the domain of pathology.

Antral diseases are much more frequent than past clinical observations have led us to believe. Gradenigo has recently given us the result of one hundred and three autopsies in which he discovered pus in the maxillary sinus in eighteen per cent. of the number. Jeanty, of Bordeaux, has made a study of the same subject, under the title of "Latent Empyema of the Antrum of Highmore," tending to corroborate the above fact of its greater frequency. He has observed that there are many cases of empyema of the maxillary sinus where the presence of pus provoked no symptoms, and where the only sign was a purulent, or muco-purulent, nasal secretion, in not sufficient quantity to attract special attention.

Differential Diagnosis.—Since the subjective symptoms vary so much, one must necessarily place more, if not full dependence, on a study of the objective signs. The more constant symptoms is a purulent discharge, unilateral or bilateral. My statistics show pus in both antra in seventeen per cent. of the cases operated on. The discharge is generally simply purulent, seldom mucous or sanious, is usually of the consistency of cream, sometimes like thickened milk. In chronic cases it may have undergone a caseous degeneration. The odor varies, sometimes being unpleasant to the patient only, and again quite fetid. The pus is usually found in the middle meatus; generally lying on the anterior and inferior part of the middle turbinal, occasionally between it and the septum. When pus is wiped away with a pledget of cotton it can be made to reappear by Boyer's position or pressure on the facial wall of the maxillary sinus.

The above-mentioned objective phenomena, however, are common to all diseases of the frontal and anterior ethmoidal sinuses, and sometimes to myxomatous polypi. The fetid odor of the purulent discharge, although more or less characteristic, may be common to that of rhinitis atrophica, rhinitis caseosa, rhinitis syphilitica, hypersecretion of the naso-pharyngeal lymphoid tissue, caries necrosis, rhinoliths, foreign bodies, and neoplasms involving the nasal and accessory cavities.

It is possible in many cases to differentiate it without much difficulty from the musty sepulchral odor of atrophic rhinitis, and the nearly intolerable fetor of syphilitic necrosis. In the presence of vague or ill-defined symptoms the absence of the classical symptom of distention, and perhaps the purulent discharge in the so-called cases of latent empyema, we must resort to one or all of the following methods to diagnosticate the pathological conditions of the maxillary sinus, viz.: 1, Translumination; 2, sounding; 3, irrigation; 4, exploratory puncture. The method of translumination, which we owe to the erudition of Voltolini, is a ready and quite reliable diagnostic measure in antral disease. It is painless of application, is not repelling to the patient, and as a matter of routine has found favor with rhinologists as a preliminary step to the more thorough surgical methods of exploratory puncture. Although the method of translumination has proven a disappointment and embarrassment to some, yet it has been found a most useful means in the diagnosis not only of diseases of the maxillary sinus but of the ethmoidal and frontal sinuses as well. Although usually a rosy red light suffuses the cheek in translumination the diagnostic point of greatest value rests on the suborbital and intra-nasal appearance.

It is now an accepted fact that the normal tissues in the naso-maxillary region, both in the young and old, are diaphanous, and when they become thickened or infiltrated, as a result of inflammatory or other pathological processes, the rays of light are not transmitted and umbræ result. In the antral disease, therefore, the real cause of umbræ is more likely to be the infiltration and thickened mucosa, and not necessarily the presence of pus. Every sclerosed area of lupus, and infiltration or thickening of the mucosa of the ethmoidal and frontal sinuses, as well as hyperplasia of the middle turbinal, will develop intra-nasal shadows, with or without suborbital umbræ. Gougenheim said that translumination was embarrassing, because it did not resolve the doubt, for on finding a beautiful suborbital umbra and thereupon opening the maxillary sinus he found no pus.

The presence of an umbra, therefore, is no decided indication of pus, but it may be a positive sign of some pathological condition of the antral mucosa. Robertson found that on opening an antrum containing much pus, and which had been a decided and unequivocal umbra on translumination, after thorough irrigation gave the same umbra as before.

We sometimes meet with cases of atrophic rhinitis in which slight and occasional pain is complained of over one or the other of the maxillary sinuses, and in which crusts form more abundantly on one side in the upper portion of the nose, near the hiatus semilunare. When these crusts are removed we will occasionally see a small quantity of muco-pus, which, from its location, is thoroughly suggestive of having its origin in the maxillary sinus or anterior ethmoidal cells.

I examined one such case with the electric light, and found a well-marked suborbital umbra, and intra-nasal shadows corresponding to the middle turbinals. I opened the sinus by my method, and was very much surprised on finding no pus. The irrigation gave her so much relief that it was repeated every second or third day for three weeks, when the intra-nasal symptoms had ameliorated so much that the openings were allowed to close. Her condition improved rapidly and her visits were discontinued in a few more weeks with an apparent cure.

Since then I have opened the antra of several patients suffering from a collapse of the inferior turbinals, and formation of thick, foul-smelling crusts, mostly on one side, in all of whom translumination showed a suborbital umbra, and on exploratory puncture no pus was found. In each case the perforation and thorough irrigation gave much relief and progressed rapidly toward a cure. I have not had the opportunity of opening and exploring the maxillary sinus, as Robertson has done. I believe, however, he has struck a key-note in the pathology of antral disease, and that there exists some co-relation between ozæna and antral disease, the exact nature of which I am not prepared to state at present. In the light of these disclosures the method of translumination, although not as important a means for diagnostic purposes as was believed by the sanguine Voltolini, and Heryng, yet it will not be difficult to convince the more sceptical of its greater value in the diagnosis as well as prognosis of diseases of all the accessory cavities of the nose, the sphenoidal perhaps excepted.

These facts do not detract from the value of the measure, since the return to normal illumination in the same case after treatment is a ready means of determining the process of repair, and a return of the tissues to their normal transparency. It therefore becomes a most important prognostic and supplementary procedure to proper surgical treatment. Since you are familiar with the technic of the method of translumination, I will call attention to what I believe to be the requisites for a successful application of the same, viz., 1st, absolutely dark room; 2d, sufficient light; 3d, removal of dental plate. The second method, that of sounding, is far from proving satisfactory, on account of the anatomical relation of the ostium maxillare to the nasal cavity. It is a decidedly difficult operation, and, according to Schech, succeeds in about thirty-three per cent. of the cases. If the attempt proves successful, the presence of pus or caries may be determined. The method by irrigation is equally as difficult as the foregoing. Moldenhauer states that, by means of a syringe with a properly curved nozzle, fluids may be injected not only into but against the ostium, finding their way into the cavities, and displacing pus when present.

In the paper before referred to, which I read before the Illinois State Medical Association, May 9, 1890, I described my method of using peroxide of hydrogen, which enabled me to satisfactorily differentiate between empyema of the maxillary sinus and the other sources of pus discharged into the nose.

My method is as follows: Having thoroughly cleansed the nose and cocainized the nasal mucosa—especially of the middle and inferior turbinals—a small hypodermic syringe, having a long silver cannula bent within a quarter of an inch from the distal end to a right angle, is passed into the semilunar hiatus, and a solution of peroxide of hydrogen (1 part to 12 of water) is injected into the antrum. If pus is present it is displaced and fills the nose with a white foam. That the solution has entered the sinus will be made evident by the patient complaining of slight pain at the roots of the teeth and a sense of fulness of the cheek. I know of no test so simple, free from danger, and easy of application if the mucous membrane of the turbinals are thoroughly collapsed by cocaine.

The fourth method of exploratory puncture may be performed by perforating the outer wall of the nose in the lower meatus, using the styles of Mikulicz, the trocar of Krause, the trephine of Tornwaldt, the fine trocar and cannula of Lichtwitz, the aspirating syringe of Luc, or by perforation of the alveolus in the absence of or on the removal of a tooth (which latter method I will not again mention, only to condemn), perforation of the alveolar apophyses, or perforation of the wall of the maxillary sinus in the canine fossa, large enough to admit of digital exploration. By the above methods of exploratory puncture we can determine positively the presence of pus, providing there are no anomalous ridges or septa, which, according to Berger and Tyrman, may divide the sinus into separate compartments.

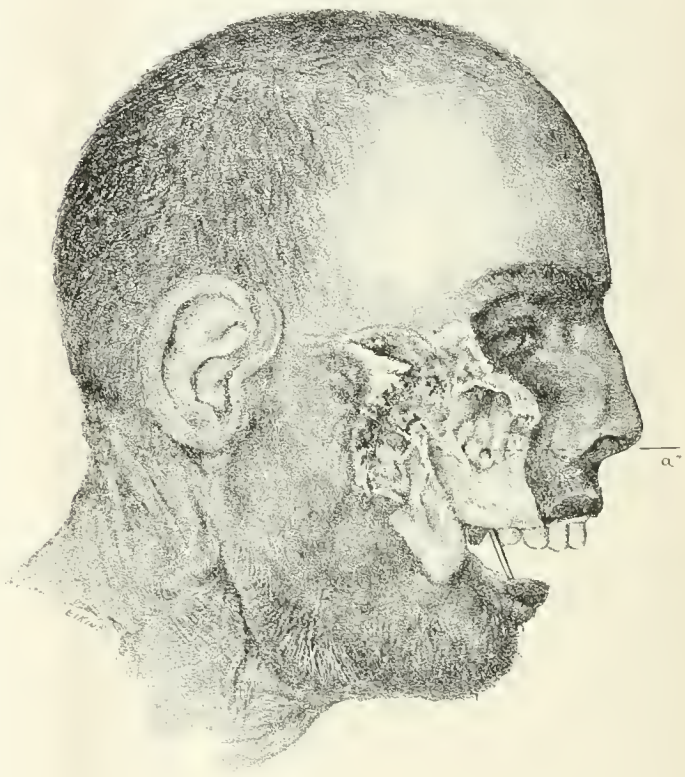

Fig. 3.

By the last method, however, which permits of a thorough exploration by the finger as well as an electric light searcher, we can determine positively the exact pathological conditions that obtain, and supplement the same by the proper surgical treatment.

Puncture of the outer wall of the nose, by way of the meatus, has been the favorite method of Mikulicz, Lichtwitz, and their followers. If made for diagnostic purposes only, barring the danger of breaking the trocar or needle and the difficulty of the procedure on account of abnormalities of the inferior turbinal and septum, I can see no objection to the method. For therapeutic purposes, however, I believe that the outer wall of the nose is a most undesirable location, for the following reasons: First, the opening does not enter the most dependent part, but from four to eight millimetres above the level of the sinus (see Fig. 1). Second, that drainage therefore cannot be perfect. Third, that the mucous membrane will close the aperture in a few hours after the puncture, and that consequently at each treatment it will be necessary to search for the previous opening, or, if necessary, make a new one,

a procedure which would be objected to by most patients. Hence, if we are to medicate or irrigate through the nose, I much prefer to do it by the natural ostium maxillare. Some writers still advocate perforating the alveolus from below with a drill, in the absence of the second bicuspid or first molar. Unless the perforation is made at the most dependent part, instead of at the point of a conical eminence corresponding to the roots of the teeth, the desired object is not obtained. Again, the food is much more apt, especially during the mastication, to find its way into the sinus and may prove a source of irritation and cause of persistent suppuration. I much prefer making the perforation at the alveolar apophysis, as shown in Fig. 3, "*a*," because the cheek will cover the opening or draining-tube that I generally insert and will prevent food from entering the sinus. The essential feature of the treatment of diseases of the maxillary sinus, more especially when the presence of pus has been established, consists in opening the cavity for proper drainage, through irrigation, and disinfection. Any other plan involves a long and tedious course of treatment, with exceedingly doubtful results.

My method of exploratory puncture, which serves for diagnostic as well as therapeutic purposes, is that of perforating the alveolar apophysis. The mucous membrane having been cocainized, by the local application or submucous injection of a ten per cent. solution of cocaine muriate, a circular piece of mucous membrane is cut out with a tubular knife, just below the gingivo-labial fold, between the roots of the second bicuspid and first molar. A drill worked by an electric motor is directed upward, inward, and backward at an angle of about forty-five degrees with the plane of the alveolus, the drill entering the sinus at its most dependent part, as shown in Figs. 1 and 3. The opening thus made can be enlarged by drills or burs of a sufficient diameter to admit of thorough irrigation and disinfection. A gold drainage-tube must be so fitted that the distal end will enter just within the sinus, while to the proximal end is properly fitted a collar or clasp by which it is made fast to a tooth, thus holding it securely in place.

The after-treatment consists in daily irrigation of the cavity with an antiseptic solution, preferably a saturated solution of boric acid, and followed by the insufflation of iodoform, iodol, aristol, or europhen.

In cases where suppuration persists beyond a reasonable time, I enlarge the opening by a trephine or tubular knife, and explore the cavity with a probe. If there is much thickening of the mucosa, or the exploration discloses caseous pus, I curette thoroughly, following it by irrigation, and packing with iodoform gauze for twenty-four hours, which is then removed, and after irrigation one of the above powders (and preferably the europhen) is insufflated and repeated every second day. I am quite favorably impressed with the method of Robertson, of perforating the anterior wall of the maxillary sinus in the canine fossa, of sufficient size to make a digital exploration and to use an electric searcher.

Since it seems desirable in those chronic cases of persistent suppuration of thoroughly exploring the maxillary sinus, the above radical measure will meet the approval of many, because we are thereby enabled to submit the entire field of operation to a searching examination and effective surgical treatment.

705 Venetian Building, Chicago, Ill.

Threatening a Dead Man.—The Court of Schleswig-Holstein not long ago published the following notice: "At the request of Herr Peter Lohmann, of Altona, the seaman, Dietrich Lohmann, who was born in Kirchmore in November, 1848, and was drowned on the journey from Stockton to Hamburg while sailing in the ship Bertha Jenny, is hereby called upon to appear before this Court and report himself on or before Friday January 20, 1893, at 11 o'clock P.M., under pain of being declared dead."

THE DIAGNOSIS AND TREATMENT OF THE EARLY STAGES OF CHRONIC BRIGHT'S DISEASE.

By BOARDMAN REED, M.D.,

Atlantic City, N. J.

Albuminuria is by no means synonymous with Bright's disease. It is one of the symptoms sometimes conspicuous by its absence throughout the whole course of the malady. In chronic interstitial nephritis especially, it is rarely an early symptom, and even in the later stages, when discoverable at all, is apt to be found in small proportion only, and intermittently rather than constantly.

A few years ago, before the utter inconclusiveness of a mere chemical examination of urine had become apparent to me, a prominent physician from a neighboring city came under my care in Atlantic City. He complained of vertigo and debility, and had a heavily furred tongue and rather a weak pulse. Examination showed some enlargement of the heart and liver. A thorough chemical analysis of the urine, first by the acid and heat test, and then by Heller's test after careful filtration, revealed not even a trace of albumin. The urine was murky with urates, and showed a specific gravity of 1.024. The usual remedies brought only partial relief. During the ensuing four weeks several of the patient's professional friends saw him with me at different times, and various views were held as to the case. A specimen of his urine was taken by one of these gentlemen, and was said to have been examined (probably chemically only) at the laboratory of a well-known medical college, with negative results. The patient gradually grew weaker, his heart-action especially becoming markedly feebler in spite of tonics. Finally, symptoms of mental hebetude supervened, when a second examination was made by me. There was still no trace of albumin, but the specific gravity had fallen to 1.010, showing renal inadequacy, and the microscope revealed an abundance of hyaline and granular casts with epithelia from the renal tubules. Professor Osler, of Baltimore, was then summoned in consultation, and confirmed the diagnosis. The patient was conveyed home, and died a few days later. This was a striking example of a class of cases by no means uncommon. My note-books show numerous instances of both early and advanced cases of chronic nephritis without albuminuria.

Dr. Sellew reported to the New York Pathological Society, February 8, 1888, a case of chronic Bright's disease in which neither albumin nor casts were found at any time. The diagnosis was made from the pallor, occasional œdema, diarrhœa, and weakness, and was confirmed by the autopsy.

Mesnard contributed to the *Gazette Hebdomadaire*, in 1890, a paper entitled "Mal de Bright sans Albuminurie" (Bright's Disease without Albuminuria).

Millard, in the latest edition of his work on "Bright's Disease of the Kidneys,"[1] devotes a separate chapter to "Nephritis without Albuminuria." He cites the opinion of numerous authors, such as Semmola and Mahomed, to the effect that chronic nephritis may be unaccompanied by albuminuria, and reports cases from his own practice in proof of the same. Yet Millard, not content with the heat and nitric acid test, which will show one part of albumin in 100,000 parts of urine, has in all doubtful cases resorted to either Tanret's or his own (phenic and acetic acid and potash test), by which one part in 300,000 can be detected.

Tyson, of Philadelphia, in a private letter to the writer, after alluding to the frequency with which albumin and casts are overlooked for want of care, writes: "The fact remains, however, that there are a certain number of cases of chronic interstitial nephritis in which there is no albuminuria."

Danforth, of Chicago, in a recent paper entitled "Tube Casts and their Diagnostic Value,"[2] sums up the matter in these words: "As a diagnostic symptom, therefore, albuminuria has very little value and no uniform value."

[1] New York: Wm. Wood & Co. 1892.
[2] Philadelphia Medical News, July 23, 1892.

But medical science is not powerless to detect the oncoming of Bright's disease, or even, in favorable instances, to arrest its advance. Insidious as are its approaches, they are never entirely unheralded by symptoms sufficient to place the well-informed physician on his guard. These symptoms are singly not diagnostic, but when several of them are observed in the same case, they should always arouse suspicion. In middle life or old age, or when persistent at any age, they should invariably lead to a thorough examination of the urine not only chemically, but also and especially microscopically, whether albumin be found or not.

The catalogue of symptoms is a long one and includes nearly all those familiar to the observant physician as indicative of the most usual digestive, nervous, and circulatory disorders with those of polyuria, gout, and rheumatism added. Œdema, more or less localized and transitory at first, is sometimes an early symptom in chronic parenchymatous nephritis, rarely in the interstitial form. Anæmia always exists when the disease is fully established, but is not always an early symptom. Sometimes the skin is darkly pigmented so as to suggest Addison's disease.

The most frequent early symptoms are among those which are wont to be referred to indigestion. These include especially vertigo, headache, nausea, flatulence, deranged bowels, languor, debility, and palpitation of the heart. Along with these familiar deviations from health are frequently to be noticed a lithæmic condition with the usual consequences: nervous irritability, despondency, and often melancholia with insomnia.

All these things are often due to over-eating and insufficient exercise, but when they do not disappear speedily under a reformed regimen, including suitable diet and exercise, with appropriate medication, we should think at once of the kidneys, and interrogate them in a manner which can leave no question as to their condition.

Much has been written concerning increased arterial tension as a pre albuminuric symptom of Bright's disease. Mahomed in England, and Da Costa and Longstreth, of Philadelphia, have made important contributions to this subject. My own observations lead me to believe that there is sometimes a still earlier link in the chain of causes and effects, which, when not interrupted by treatment or by a radical change of habits, leads on to structural renal disease. This is cardiac palpitation, with a weak pulse due to overstrain or to undernutrition of the heart muscle. The urine in such cases is usually scanty and heavy. I have frequently found hyaline casts in the urine when this condition of weak heart, with a small, soft pulse has existed, associated usually with indigestion and various nervous disturbances. Some of these cases have progressively improved under treatment, the casts disappearing for a long time at least, while the health has seemed to be re-established. In other cases the casts have persisted and become more numerous, and the usual picture of chronic interstitial nephritis has gradually developed.

Millard and Danforth both hold that true fibrinous casts are not to be found in urine from healthy kidneys. They agree in believing that more or less nephritis always exists as the cause of the appearance of even hyaline casts, since a careful search will nearly always show epithelial cells or other confirmatory evidences of renal disease. Millard maintains, also, that such casts may often be discovered at an early and curable stage of the affection. He reports a number of cases that have been apparently cured.

I have seen numerous cases in which, after finding hyaline casts occasionally for months, the patients meanwhile presenting the usual symptoms of incipient Bright's disease, including digestive disorders, debility, and disturbed heart-action, improvement set in, and finally all signs of disease were lost. In the last specimens of urine obtained from some of these cases, neither albumin nor casts were discovered, but sufficient time has not yet elapsed to warrant the claim that a cure has been effected. Tyson states that he has never found true casts in urine from what he considers normal kidneys.

There are not wanting writers, however, who assume the possibility of hyaline casts being unassociated with any other abnormal appearances in the urine, and hold that in such cases we may not diagnosticate anything worse than congestion. For myself, I am satisfied that Tyson, Millard, Danforth, and others are correct in considering even hyaline casts as always showing a structural alteration in some part of one kidney at least, since they prove *per se* the existence of a fibrinous exudation which can result from inflammation only.

Danforth goes further and claims that even the mucous or mucin casts, which have not hitherto been considered of diagnostic importance, are certain evidence of a catarrhal irritation of the uriniferous tubules. He insists that they are an early sign of kidney disease, and claims for them "a position of pre-eminent importance in the early diagnosis of interstitial nephritis."

It has been sufficiently established, then, that the chronic forms of nephritis, especially the interstitial, are of slow and often insidious development, but that it is yet possible to recognize them in an incipient stage, when treatment may be hopefully instituted. In making a diagnosis the revelations of the microscope are of the first importance. There are many warning symptoms, but albuminuria is rarely to be found among them until the disease has advanced too far to admit of cure.

Physicians in large practice do not have the time, as a rule, to make exhaustive microscopical studies of urinary sediments, and it cannot be expected that their medical assistants will always possess the patience and enthusiasm necessary to the attainment of decisive results in that line. Mucin and hyaline casts, the forms most common in the beginning of chronic nephritis, are recognized with some difficulty even by an experienced eye with a good microscope, the best light, and all the other conditions favorable. One or two hours must often be spent in examining a number of slides before one can decide positively as to the existence or non-existence of such casts in a given specimen of urine.

Few patients would be willing to pay even half the value of so much of the time of a skilled physician. A practical way to overcome this obstacle is to enlist in the work a medical student, or even any non medical person who has the requisite intelligence, patience, and interest in scientific studies. Such a person can be readily trained to recognize the various forms of casts, etc., and can then be depended upon to make the preliminary search. The physician or his medical assistant should, however, always be called to verify the results and decide whether the suspicious cylinders or cylindroids be genuine casts or not. Mucin casts are easily differentiated from hyaline casts by their striated appearance, though otherwise very similar. More difficulty may be experienced at first in discriminating between the granular variety and a kind of false casts recently described by authors, and called urate casts. These present a slightly notched appearance on the sides, and with careful focussing the contained particles of urates, even when amorphous, will be seen to be coarser than the fine *débris* constituting the contents of true granular casts. Another peculiarity of these urate casts, which I have not seen mentioned, is that they are often found in large numbers arranged parallel to each other, as though all formed at the same moment by the rolling of the cover-glass in a certain direction over the slide. True granular casts are rarely so numerous, and are never arranged in strictly parallel rows. Considerable practice is necessary to enable the observer to recognize promptly blood-corpuscles, pus-cells, and epithelial cells from the different parts of the genito-urinary tract, but the ability to do this should nowadays be possessed by every practitioner of medicine who is not within reach of a specialist whom he can and will get to do microscopical work for him, whenever there is reason to suspect disease of the kidneys.

In the treatment of chronic Bright's disease I have relied largely upon correcting all unhygienic habits, including especially errors of diet. In most cases it is found

that the nitrogenous articles of food are being taken to an extent which, considered in relation to the amount of exercise, is excessive. This is particularly apt to be the case when the urine is heavily charged with uric acid or the urates. Fried food, pastries, and the sweets generally also disagree very often with those dyspeptics, who are laying the foundation for future nephritis.

An almost exclusive milk diet will sometimes work wonders in arresting the progress of Bright's disease. In most of the cases which have been under my care, but especially those with the urates in excess, a prolonged and constant use of the milder natural alkaline waters has proved of the greatest benefit. The various lithia waters have often been helpful, but not always nor in proportion to their content of the lithia salts. Almost uniformly good results have been noted from the use of the waters from several of the springs at South Poland, Me. Those known commercially as "Poland Water" and "Polsko Water," which are nearly identical in their mineral constituents, both being weak alkaline waters with a minute amount of silica in them, have been the most effective in my hands. They possess decided diuretic without irritating qualities.

A number of springs at Waukesha, Wis., also furnish water of similar contents which has proved beneficial in both diabetes and nephritis. I cannot agree with those who maintain that these and other like spring waters are valuable solely because of their purity or comparative lack of mineral ingredients. If this were the true explanation, distilled water would accomplish still more, but such is not the case.

As to drugs, those which I have found most useful in the incipiency of chronic nephritis are, first those which improve the digestion and the glandular secretions of the liver and alimentary canal, including especially the mineral acids and small doses of the mercurials; second, medicines which, like arsenic and iron (always in small, non-irritating doses), improve the quality of the blood and at the same time—probably, in consequence of this action—strengthen the nervous system and heart; and third, the more usual and often abused cardiacs such as digitalis, strophanthus, cactus, etc., which raise the arterial pressure and tend to produce diuresis. At a later stage, when the left ventricle has become hypertrophied and the pulse is tense, small doses of trinitrin may be temporarily useful. All active medication is, as a rule, better avoided, and even the tonics need to be managed with great care and discretion so as not to risk irritation of the kidneys.

Regulation of the diet, clothing, exercise, and mode of living generally is much more important than medicines: and when the disease threatens to become seated in spite of the curative measures described, a change to some southern clime is desirable for the winter and spring months. Electricity, massage, and some of the hydriatic procedures, including especially daily spongings of the whole body with salt-water, are all valuable as roborant measures in cases in which the nervous system is in an adynamic condition, as is very often the case in the beginning of chronic Bright's disease.

Losophan.—Losophan may be looked upon as a triiodide of cresol. It contains eighty per cent. of iodine and is soluble in alcohol and readily taken up by fatty substances. Dr. Saalfeld finds a one per cent. ointment valuable in skin diseases due either to vegetable or animal parasites, as tinea tonsurans and pityriasis versicolor; for pediculi capitis and pubis twenty-five per cent. of vinegar is added to the ointment; and in the case of scabies a stronger preparation is employed containing two or three per cent. of losophan. In chronic skin infiltrations an ointment of the strength of one or two per cent. was useful, but in acute eczema it appeared to be irritating. In prurigo, syeosis vulgaris, acne vulgaris and rosacea, and in pruritus it was very effectual. It appears to be of little use, however, in psoriasis or urticaria and is contraindicated in acute inflammations of the skin.—*The Lancet.*

Progress of Medical Science.

Tuberculous Ulcer of the Stomach.—The following are the conclusions of Dr. J. H. Musser in reference to this disease: 1. Tuberculous ulceration of the stomach is rare. 2. It occurs more frequently in children. 3. It is never primary. 4. Gastric infection is probably due to the voluntary or involuntary swallowing of sputum. 5. The presence of the bacillus tuberculosis is the only positive proof of the nature of the ulceration. 6. The anatomical peculiarities of this form of ulceration include the following: *a*, The seat of the ulcer is in the lesser curvature, although it may be found in any position: *b*, more than one ulcer is usually seen; *c*, the ulcers are large and irregular; *d*, miliary tubercles on the floor of the ulcer in the submucous coat are seen; *e*, the ulcers are near vessels and the results of vascular ulceration are found; *f*, small caseating masses are seen in the ulcer or at a portion of the periphery. Similar collections are found in the territory adjacent to the ulcer, in the submucous coat; *g*, the peritoneum is studded with miliary tubercle very often; *h*, neighboring lymphatics are often involved. 7. In the large majority of cases there were no symptoms during life. 8. Sudden hemorrhage is a frequent symptom and cause of death; it has been particularly noted in children. 9. Epigastric pain and vomiting may occur. 10. The presence of gastric symptoms of this kind, occurring in the course of tuberculosis, is significant of possible ulceration. 11. In view of the fact that the swallowing of sputum is possibly dangerous, expectoration should be insisted upon in adults and its method taught to children.—*Medical Press.*

Asaprol.—According to Dr. Staekler asaprol is the calcium salt of β naphthol and monosulphonic acid, and occurs in the form of a white powder, very soluble in cold water. At 122° F. it undergoes decomposition. The tests for its presence in the urine are the same as those for naphthol. Asaprol is toxic to rabbits in large doses. Smaller doses are well borne. Clinically, the author has tested it in two cases of influenza with high temperature and great pain with good results. In one case all symptoms were relieved in thirty-six hours, and in the other in forty-eight hours, although both quinine and antipyrin had been given without avail. The drug proved equally efficient in the various forms of rheumatism, especially in acute articular rheumatism. The author has besides obtained good results from its use in a number of other affections, such as gout, asthma, furunculosis, anthrax, various infective conditions, tonsillitis, etc. Gradually increasing doses are recommended. Thus for adults the dose will be two grammes on the first day, three on the second, and four on the succeeding days, to be again gradually reduced when the desired antithermic action has been obtained. The drug should be given with plenty of water, so as to encourage diuresis. Asaprol is incompatible with alkaline iodides, sulphates, and with most of the alkaline salts.—*Bulletin Général de Thérapeutique*

Cantharides in the Treatment of Albuminuria.—Dr. Lancereaux believes albuminuria in itself is without gravity. The retention of excrementitious matters constitutes the real danger in renal affections. He believes in drastics, diuretics, and cutaneous stimulants. When the uræmic attack has subsided we should seek to modify the diseased process. If the connective tissue is attacked, he gives iodide of potassium. If the renal epithelium is involved, the tincture of cantharides in the daily dose of six to twelve drops produces an abundant diuresis, and causes the anasarca to disappear. He gives milk when the renal epithelium is involved and there are symptoms of uræmic intoxication. The milk acts as a diuretic and is an indispensable adjunct to the treatment. He orders a mixed diet, containing but little nitrogen, has no fear of eggs, and prefers beer to wine. In his opinion the tincture of cantharides is an excellent remedy.—*La Médecine Moderne.*

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TIMIDITY AMONG COUNTRY DOCTORS.

IN a series of articles entitled "Object Lessons in Gynecology," Dr. Link, of Petersburg, Ind., draws an entertaining picture of the self assumed importance of the city specialist, with his utter contempt for the work of his country cousin. There is no doubt that the average city doctor is quite unfamiliar with the kind of work demanded of his colleague in the rural districts. There is also no doubt that there are many worthy and conscientious practitioners in the vast stretches of our territory, roughly called "country," who are in every way the peers of their city *confrères*.

Dr. Link, in speaking particularly of the reproach of timidity, often levelled at physicians in the country, claims that they do not lack boldness, except when they lack information. He says (*The Medical and Surgical Reporter*) with reference to the class of practitioners he represents: "We are all-round specialists. To day doing an abdominal section, to-night a high-forceps delivery or a podalic version, to-morrow amputating a toe, removing a pterygium, trephining for fracture, or pulling a tooth, then hurrying away to a case of typhoid fever or cholera infantum. Being well-grounded in the branches of medicine necessary to do all these varieties of work with credit to ourselves and satisfaction to our patients, we must, of necessity, be good in all lines, and exact and thorough in none. Our obstetrics is better than that of the city surgeon's, but our surgery not so good. Our surgery is bet ter than that of our city friend who devotes himself to obstetrics, but our treatment of the eye is not up with that of him who treats the eye alone. Our general practice in systemic diseases is not equal to that of Pepper or Da Costa, but we can reduce a dislocation or adjust a fracture better than either of them. There is a certain boldness, too, which prevails among hospital physicians and surgeons, because of the shortness of the time during which professional relations exist between them and their patients, and the lack of severe personal responsibility which of necessity obtains among them. Of course the hospital physicians or surgeons are responsible to their conscience, and we believe they have as high a standard of rectitude as any set of men in the world; but if a bad result follow their work, or they decide to try a new method or a new line of treatment, they do not have to explain to the friends of the patients and defend it from the harsh criticisms of envious rivals."

He points out also that physicians in country practice while losing a patient are always losing a personal friend, and not seldom alienating a whole family. This fact often makes them appear to hesitate where their friend of the hospital staff would cut the Gordian knot with his scalpel and save a life, which, at the worst, would undergo no more risk from the operation than from the bad effects of the disease itself. "The bread-and-butter argument creeps into our lives when we try to be most unselfish, and we hesitate to take a course not backed by authority, because we get the moral support of our brethren, hence the support of public opinion, only by treading the beaten path. The man in the city being more a law unto himself, and having charge of those who are looked after by the charity of others, is expected, occasionally, to strike out new roads for the benefit of mankind and for the purpose of settling doubts, or establishing methods or remedies that meet new demands. The country doctor is, to a large extent, a slave to text-books. What exists between the leaves of conceded authorities is to him the garnered wisdom of ages; and the cautions and exceptions addressed to him by his well-thumbed authors, make as strong an impression as the rules and principles which they lay down for his general guidance."

Again, we are told that the modesty of the practitioner remote from medical centres adds to his timidity from other causes. Feeling his lack of exact knowledge, and greatly magnifying the advantage of his more favorably situated brethren, he often gives nature a longer trial and a better chance than she would have in a city or larger town. This fact as often redounds to the benefit of the patient as a more active policy: especially if that policy has no better reason behind it than enthusiastic boldness and strong self-confidence. If any one asserts his superiority, the country doctor not knowing how little, how very little difference there is between the great lights in medicine and the more humble of its followers, rapidly concedes all that others claim for themselves.

The author next points out that, nowadays they (the country doctors) "are constantly warned at the threshold or end of the description or explanation of every operation or manipulation of magnitude or difficulty, that only the specially trained or skilful should undertake it; that the skill to do most things is only vouchsafed to a few of the Lord's anointed, and that it is much safer to call counsel than to undertake some delicate or dangerous piece of work until we have become specialists. In other words, we must not go near the water until we have learned to swim. This makes a fine harvest for those who have learned to swim; but it leaves us just where we began, standing on the bank shivering with dread at the water, while our patients drown before our eyes for want of that help which we ought to give.

"Another cause for our timidity and backwardness is the meagre pay which we receive for our best and utmost efforts. To buy the best books and to take the highest and best class of current literature costs money, while a liberal supply of necessary instruments is to the country doctor an expenditure of almost a small fortune. Being a representative of all the specialties and the practice of medicine also, to be moderately well equipped he must have a number of instruments for each line of work, and the special instruments of diagnosis and treatment that pertain to successful practice in the mere application of

remedies to the cure of disease non-surgical in character. The city practitioner often gets more for the performance of one operation than the successful and skilled country doctor does for a year's work. As the gratitude of patients is in a direct ratio to the size of the fee paid, it can very readily be seen that there is small encouragement to anything like boldness in action or fulness and completeness of equipment."

That the medical world owes much to the work done by country doctors is nevertheless undeniable, and the author gives some well-known illustrations of this fact. We have always had a leaning toward the underpaid and over-burdened country practitioner, and the earnest words of Dr. Link once more show that true heads and brave hearts are not an exclusive city specialty.

ETHERIZATION AND PULMONARY ŒDEMA.

A RECENT death from pulmonary œdema as a result of etherization has occasioned considerable comment in professional as well as in lay circles. The prominence of the patient, his sudden and startling death, and the consequent unkindly criticism of his medical attendants have again drawn attention to some of the dangers attendant upon anæsthesia, even in the most experienced hands. In this instance ether was administered in the ordinary way as a preliminary for bladder exploration, when suddenly the patient became suffocated, continuing more or less in that condition until death occurred several hours afterward. Every effort was made by skilled men to avert the calamity, but without avail. The patient had been under the medical supervision of one of the physicians for a long time, and had been considered, barring the bladder trouble, to be in good health. It is difficult, in view of these statements, to disassociate the relation of the ether to the death.

For some inexplicable reason the coroner decides that no autopsy is necessary to determine the real cause of death, and thus everyone is left in doubt, if not in alarm, concerning future cases in which ether may be administered. But there is a cause for the sad termination of this case, nevertheless, hidden though it is in the body of the victim. It is a pity that false sentiment on the part of the family, indiscretion on the part of the coroner, or the unheeded persistence of the medical attendants should deny pathology the right to explain reasons, to remove uncertainties, to verify truths, to enlarge experience, and thus in the end to be the safeguard for those whose lives may under similar circumstances be entrusted to our care.

From such an aspect there is no excuse for the coroner in declaring that an autopsy was unnecessary. There is not a medical man in the land who would be willing to indorse such a course from a scientific or any other stand-point. The coroner owed it to the medical attendants, and to the profession at large, to do exactly the opposite. Pulmonary œdema of itself is not a recognized cause of death from ether. There surely was something behind this, as a causative factor, which should have been discovered.

It is not enough to say that the case was rare or unprecedented, when there were opportunities for explaining apparent mysteries and guarding against future errors.

The difficulty of explaining the relations of cause and effect is made still more apparent by the statement that the heart and kidneys were in a healthy condition. If there were any doubts concerning these points, it would be safe to assume that one or other or both of these organs were at fault. For it is well known that the most fruitful sources of pulmonary œdema following etherization are mitral disease and chronic nephritis. The associated condition of atheroma of the arterial system with Bright's kidney is so common that it is not possible that it could have escaped the recognition of two such careful observers as the physicians in attendance. Nor does it appear that any vomited food lodged in the trachea, inasmuch as tracheotomy failed to give the indications for such a condition.

The inability to give a good reason for this unfortunate occurrence will have a bad effect upon the public mind in creating a distrust of the general safety of ether, and in causing patients upon whom operations are to be performed, to be unnecessarily apprehensive of bad results.

THE LONE STAR STATE IN TROUBLE.

JUST as we were beginning to believe that Texas was all right, its citizens patriotic and prosperous, its physicians alert, accomplished, moral, and successful, its medical journals erudite, wise, and widely circulated, there comes this painful piece of news: "The Texas Legislature, now in session, has passed an act making it a penal offence in a physician to give a prescription for whisky without an examination. It is intended to meet a too prevalent practice of prescribing whisky for people on Sunday when the saloons are closed."

This sad announcement spells whiskey without an e, and embodies the twofold intimation that Texas people drink whiskey on Sundays, and that the doctors prescribe spirits *solatii causa*. With such evidence of decadence it is not surprising to learn further that the Legislature doesn't want to regulate medical practice, that it is voting to curtail the privileges of the doctors, and that the profession does not want national quarantine. Why is not the fiery folio of Dr. Daniels more in evidence in such an emergency?

THE TREATMENT OF HYSTERIA.

PAUL BLOCQ's recent brochure is plain and practical, and contains modern ideas upon the psychic treatment and the internal and external treatment of hysteria. The principles of these three modes of treatment are to be applied according to the form of the neurosis, its accidents, causes, and the personal quality of the patient. Briquet considered hysteria a general neurosis. To-day it is regarded more as a psychosis, ordinarily curable if appropriate measures are employed. As Dr. Mary Putnam-Jacobi has already pointed out, hysteria implies disarrangement of the functions of any part of the nervous system—in its four spheres of intelligence, mobility, sensibility, and visceral neurility. There is in it a congenital or acquired deficiency in the power of nerve-elements to effect the storage of force in nerve-tissues. This can only be overcome by increasing the stimulus to which these elements are subjected. To increase and maintain the amount of needed stimulus constitutes the sum and substance of treatment.

The first step is separation from friends. This acts beneficially in two ways: by suppressing certain conditions proper to the culture of hysteria, and by furnishing special surroundings that tend to overcome the fundamental psychic deviation from the normal. There are various types of hysteria, as the latent form, the minor, the major, and the mono-symptomatic, each requiring careful and special consideration. In obstinate cases that resist all treatment, Blocq finds hypnotism a remedy next in value to isolation as a measure directed to the psychic condition. In latent or minor hysteria hypnotism should never be used. On this point the author is most emphatic. In mono-symptomatic hysteria without convulsive attacks or other stigmata, everything must be tried, hypnotism included. And everything may fail.

External treatment comes next to psychic treatment in importance. This comprises hydrotherapy, electrotherapy, and mechanotherapy. The use of cold water once or twice a day by means of the cold affusion—douche or shower—is the most valuable of all external measures. If, for any reason, this mode of applying water to the surface of the body is inadmissible, the cold pack, or sponging the entire body with a large sponge wet in cold water may be substituted. Sea-bathing is also efficacious in mild climates, and on condition that the bath lasts but three minutes. In regard to electricity, with the exception of a few particular cases in which faradism acts well, the static current has the most beneficial effect, especially the static bath. In a general way, all kinds of mechanotherapy are beneficial, whether in the form of gymnastics, massage, or systematized mechanical movements. In pure hysteria that is neither induced nor sustained by organic change, internal treatment is of comparatively little value. The bromide salts are practically useless, except to help decide the diagnosis between epilepsy and hysteria. Monobromide of camphor, in pill form, three grammes three times a day, has given occasional good results. Valerian and valerianate of zinc or copper bring about some temporary relief. While active treatment is not generally required during hysterical attacks, ether and the bromide of ethyl, to which they readily yield, need not be absolutely proscribed. When narcotics are required, sulfonal or chloral is better than any form of opium. Hysterical subjects are so often predisposed to morphinomania that it is wise to forego the use of opiates.

Surgical interference in hysteria is only allowable when deformity, due to fibro-tendinous shortening exists after spasmodic contracture. Nerve section for pain, various operations, as ovariotomy, etc., are useless and unjustifiable. When apparent cure follows, it cannot be proved that this amelioration is due to surgical interference. The gain is not always permanent. Mutilation, Blocq goes on to say, is too high a price for transitory freedom from symptoms.

The first thing to decide in hysteria and functional nervous disease is whether symptoms, especially psychic abnormities, are due to an imperfect organization as determined by heredity and environment, or to the operation on the nervous system of a vitiated plasma—the vitiated plasma that necessarily accompanies any interference with the general health. Organization and blood composition may both be at fault. Those agents which act most injuriously upon the blood as well as on the nervous system are those which most commonly produce nervous states. Ptomaïnes, leucomaïnes, and uric acid can produce psychic symptoms that vanish on the substitution of normal plasma. Molecular structure, however, may be so affected by the prolonged action of the toxic principle that some time must elapse after the blood has regained its normal composition, before nerve-tissue can entirely regain its tone. Defective organization predisposes to psychic disturbances. So does suboxidation; so does alterations in the composition of the blood. It is quite possible that in the future the term hysteria may become more restricted in meaning, may perhaps vanish from medical nomenclature as a distinct entity, like dropsy, and come to be considered a symptom only. Even now, to take the condition of minor hysteria more seriously as a distinct entity than the x, y, z of mathematics, other than an unknown quantity, is to write one's self the reverse of modern.

THE PRESCRIPTION JOKE AND THE DUELLO.

An esteemed illustrated weekly publishes the following very humorous paragraph:

"Have you heard about Dr. Bolus? he has challenged Dr. Hokus to a deadly duel."

"Has he? And what weapons has Dr. Hokus named?"

"Prescriptions."

The deadly character of prescriptions was first noted and treated of in the same laughter-making way as above by Nicarchus, the Greek, four hundred years before Christ. It can hardly be doubted that Plato and Socrates were very much amused over it at about this time, when the joke may be said to have been really current and in the air. One can easily imagine how annoyed Hippocrates must have been at the guying he received, for that learned gentleman seems to have lacked a sense of humor, and the prescriptions that he gave were carefully gathered and cautiously doled out. A few hundred years after his time, Juvenal was unable to refrain from reviving the pleasant facetiæ of Nicarchus, and Martial hit it off still better in his very stinging way. There is evidence that Galen must have laughed uneasily at this time. A full account of the historic course of the Nicarchian jest over the deadliness of prescriptions would lead us to annotations upon the lives and writings of Molière, Pascal, Montaigne, Addison, Joseph Miller, and other ancient and distinguished littérateurs and wits, upon whom our modern contemporary so felicitously draws. We can extend hearty congratulations that Nicarchus has reached the office of a modern New York humorous editor. There is nothing which lives like a good joke. The liver-jostling wit, for example, which stands quoted at the beginning of these remarks, is exactly 2,293 years old, and yet here it is making laughter to-day as it has been doing in the echoing corridors of the past centuries. Great is the power of a humorous and inventive mind!

It is to be observed that the prescription joke as cited above is not exactly as given originally B.C. 400 by Nicarchus. In fact, while the essential spirit of the wit is retained, the form is a little patched and amended; we might say doctored, perhaps; for the true function of the funny paragrapher of the day is to doctor old jokes, changing their sturdy senescence into a spirited and contemporaneously interesting juvenility. There may yet be

in the higher journalism of the future a degree conferred—*Jocorum Doctor*; and we know where the honor should be first bestowed.

If the present generation of humorous paragraphers who are working on the Prescription at set intervals were better acquainted with history, they would know that on one occasion a duello did occur in which the prescription was the weapon. It was some hundred years ago, when gentlemen of all persuasions were more disposed than now to personal controversies. Dr. Wynter and Dr. Cheyne were the contestants. The provocation we do not remember, but the duellists were rival practitioners, and no doubt there had occurred plenty of good reasons for mutual hard feeling.

Dr. Wynter fired the first shot with the following—we regret we cannot, for want of space, give all his verses:

"Suppose we own that milk is good,
And say the same of grass;
The one for babes is only food,
The other for an ass.

"Doctor, one new prescription try
(A friend's advice forgive)—
Eat grass, reduce thyself, and die,
Thy patients then may live."

Dr. Cheyne, who was somewhat obese, but lacked not in wit, replied:

"My system, doctor, is my own,
No tutor I pretend;
My blunders hurt myself alone,
But yours your dearest friend.

"I can't your kind prescription try,
But heartily forgive;
'Tis natural you should wish me die
That you yourself may live."

SOME REFORMS IN MEDICAL NOMENCLATURE.

Dr. R. P. Harris, of Philadelphia, is a gentleman who does not believe in the misuse of medical terms, and he has lately uttered an energetic and scholarly protest against the employment of the word laparotomy for abdominal section. The proper term, he argues, is cœliotomy, the Greek word for belly being *koilia* and not *lapara*, and he urges upon the profession throughout the world to drop the term laparotomy and substitute therefor the proper word, cœliotomy. We agree with Dr. Harris that the latter is the better word, and we shall be glad to see his suggestion adopted by writers on abdominal surgery.

But all Philadelphians are not so happy, shall we say scholarly, in their suggestions concerning medical nomenclature. Dr. W. S. Forbes, of the same city, has sent a communication to the *Medical News* in which he contends that the division of the junction of the two pubic bones should be called "pubeotomy." He objects to "symphysiotomy" as a term that may be applied to any symphysis, but says that "the name pubeotomy is illuminating; it is restricting in its meaning to the part cut; it is euphonic and in strict keeping with a proper scientific nomenclature"—and he might have added, that it is barbarous and incorrectly formed. Symphyseotomy is a wholly unobjectionable word, and it ought to, and doubtless will be retained. If it should ever be found desirable to specify more particularly the symphysis to which the term refers, it would be a very simple matter to add the qualificative pubic.

We would not have thought it necessary to refer to this proposed change, had it not received the editorial sanction of the *Medical News*. This indorsement carries with it a weight that it might not otherwise have, from the fact that the editor of our learned contemporary is known also as a medical lexicographer. But he falls into a strange error in the course of his remarks commending Dr. Forbes's suggestion. He says: "The word pubiotomy is found in the medical lexicons, but it is difficult to see why it should be thus spelled instead of the more correct pubeotomy" Because, we would timidly reply, the compound is formed from the genitive case of the first noun and not from the nominative. For the same reason the preferable term should be written symphyseotomy instead of symphysiotomy, as our esteemed contemporary spells it, in company with many other writers in this country. "We should," he justly says, "take a decided stand against the misapplication of terms in our science," and we should also, we may add, take a decided stand against the incorrect formation of our neologisms, and against the misspelling of any word in the English language.

NON-PAYMENT AND UNDER-PAYMENT FOR MEDICAL SERVICES.

How best to secure the proper payment of bills for professional services is a question which has probably at one time or another engaged the attention of every practitioner. In a recent issue of the London *Lancet* reference is made to the subject as follows:

"Combination seems the order of the day and medical men seem to be catching the infection of it. They have been so long-suffering and patient under a tacit system of non-payment or under-payment by the public that it has come about that while everybody is paid they are left unpaid or are paid last. The profession in Coatbridge have determined, in justice to themselves and all honest people, to frame a minimum scale of charges and to issue quarterly a black-list of defaulters, or of those who evade the payment of medical debts by the mean system of going from one doctor to another. It is a pity that such means should be necessary. But we are not disposed any longer to blame an honorable profession, confessedly treated very badly. A local paper, commenting on such a state of matters, traces it finally to certain members of the profession who undersell their brethern and demoralize the public. There is some truth in this, and delinquent members of the profession will only have themselves to blame if they are defined and discountenanced. Such a procedure will have no terrors for honorable men in practice, nor for the honest poor, who do what they can to meet the modest charges of their best friend, the faithful medical man, who is at their service by night or day."

The evil referred to is not peculiar to England. It exists in France and in Germany, and is by no means unknown in America. But it is questionable whether the blacklisting of delinquents is the proper remedy for the non-payment of medical bills. The whole problem is intimately associated with two other evils, namely, pro

fessional underbidding and the present method of obtaining alleged expert testimony during trials in court.

Underbidding is simply a question of honor and morality. It can be prevented only by promptly "spotting" the underbidder and holding him up to the scorn of an honest community. In large cities detection is not always easy, for the underbidder has plenty of that low cunning which characterizes the "shyster" lawyer. But in smaller towns and in the country there should be little difficulty in finding out the underbidder, and in exposing his contemptible practices.

In regard to so-called "expert" testimony, it is only too true that money will purchase opinions on either side of a contested case. The present method of securing such testimony is radically wrong. Litigation to enforce payment of disputed bills is, therefore, rarely satisfactory. Arbitrary verdicts are too often rendered. And for the doctor, what with loss of time in court, lawyer's fees, etc., it is generally a losing game, even if the case is decided in his favor.

If the entire profession were bound together by a proper *esprit de corps*, the public would soon learn that medical services inevitably call for adequate remuneration. But unfortunately people know that doctors' disagreements are so common as to have become proverbial. Hence devices such as those resorted to in the instance mentioned by our British contemporary offer no real solution of the problem. It is a question of honor within the ranks of our profession, and cannot be settled by the adoption of trades-union methods. Nevertheless, every traitor to the common interests of our noble calling should be promptly branded with lasting disgrace. And any physician who goes out of his way to deliberately inform a patient that a fellow-practitioner has overcharged him, or that he, the underbidder, would have charged less for the same services, is a trickster, who has forfeited the esteem of honorable men.

In that unwritten code, the principles of which are entrusted to the safe-keeping of all gentlemen, no paragraph is needed to specify what is meant by tricky practices.

THE PROTECTION OF THE CROTON WATERSHED.

The protest of the Committee of the New York Academy of Medicine against the Webster Bill, recently signed by the Governor, has taken an active shape in the presentation of a substitute which is now before both Houses of the State Legislature. On a former occasion, in presenting the text of this bill, we spoke of the labors of this Committee in terms of high commendation, and no necessity now appears for reiterating our views. It can plainly be seen by every unbiased sanitarian that the provisions of the bill are thoroughly rational and are likely to be most speedily effective in the wholesale suppression of the water-shed nuisances. Let us have the supplemental bill by all means.

The University of Havana.—The right of conferring the degree of doctor, which was recently taken away from the University of Havana by the Spanish Government, has now been restored to it in deference to the protests of the teaching body and the students, notably those belonging to the Medical Faculty.

News of the Week.

The Goat a Protection Against Cholera.—The most popular place in New York, if the cholera comes, should be Shantytown: and the proudest animal on the island will be the goat. For Dr. Klemperer, of Berlin, after going over the subject of securing immunity against cholera, and after trying all methods of vaccination, including the swallowing of a pint of cholera bouillon, finds that the milk of an immunized goat does the work best and most easily. Subcutaneous injection of the milk from a goat artificially made immune was given to a man (who had volunteered). The injection of 5 c.c. of this milk produced such a degree of immunity that 0.25 c.c. of his blood-serum protected a guinea-pig against cholera intoxication. There is hardly any doubt, says Klemperer, that goats may be made more resistant by further injections, and thus their milk will have greater antitoxic properties. The author thinks it permissible to hope that the injection of 1 c.c. of such goat milk will protect men not only against the intoxication of cholera, but also against the infection. The price of goats has been five dollars and upward. When cholera comes, this much ridiculed animal may take a position in history higher than the sacred bull of Egypt or the vaccinated calf of Jenner. Harlem, too, will become the centre of New York, and not an up-town annex.

The Pan-American Medical Congress.—*Venezuela's Acceptance.*—Señor P. Ezequiel Rojas, the Venezuelan Minister of Foreign Affairs, has forwarded on behalf of his government, through the United States *Chargé d'Affaires* at Caracas, a formal acceptance of the invitation issued pursuant to the joint resolution of the United States Congress to the various government of the Western Hemisphere, to send official delegates to the Pan-American Medical Congress. The selection of delegates has not yet been made, but this will be done at the earliest possible moment.

Section on Therapeutics.—It is the earnest desire of the officers of this Section that both specialists and general practitioners should contribute articles to its proceedings. Gentlemen who desire to read papers at this meeting should notify the Executive President at once of their intention, and should send him by July 10th at the latest an abstract of their paper, in order that it may be translated into the official languages of the Congress and published in the programme.—Hobart Amory Hare, M.D., *Executive President*, Philadelphia, Pa.; Edward Randall, Jr., M.D., *English-speaking Secretary*, Galveston, Tex.; David Cerna, M.D., *Spanish-speaking Secretary*, Philadelphia, Pa.

Section on Anatomy.—This Section will be devoted to the study of human and comparative anatomy and of biology as departments of natural science, as well as in their relations to practical medicine and surgery. Members of the medical profession in Latin-American countries are urged to prepare scientific communications to be read before the Section. Much valuable material will thus be collected, and articles of scientific value will find permanent place in the transactions of the Congress. The Executive President of the Section asks the co-operation of all interested in anatomy and biology in making the deliberations of the Section valuable to those present at the

meetings, and worthy of preservation in the volume of transactions of the Congress.—Dr. John B. Roberts, *Executive President*, 1627 Walnut Street, Philadelphia, Pa.; Dr. D. S. Lamb, *English-speaking Secretary*, 800 Tenth Street, N. W., Washington, D.C.; Dr. A. M. Fernandez, *Spanish-speaking Secretary*, 194 W. Tenth St., New York.

The Section on Medical Pedagogics will devote its attention especially to the history of the development of medical education in America. In the papers presented by leading teachers recent advances in methods of instruction will be considered. The Section will be made a prominent feature of the Congress, and it is hoped that those interested in medical education will co operate in the work of this Section by being present, and by actively engaging in the discussion of subjects presented. All inquiries should be addressed to one of the secretaries, J. Collins Warren, M.D., *Executive President*, Boston, Mass.; Charles L. Scudder, M.D., *English-speaking Secretary*, Boston, Mass.; William F. Hutchinson, M.D., *Spanish-speaking Secretary*, Providence, R. I.

The Resignation of Dr. J. M. Cleaveland as Medical Superintendent of the Hudson River Hospital for insane terminates a long career of usefulness to the State. For more than thirty-five years Dr. Cleaveland has been connected with asylum work, and has devoted the best energies of a long and laborious professional career to the care of the insane poor. The institution at Poughkeepsie was built under his supervision, and by his care and energy has been expanded during the past twenty years to its present magnificent proportions and enlarged capabilities. It is to be regretted that Dr. Cleaveland's health was not in a condition to allow him to continue his good work, and the managers of the asylum were thus reluctantly compelled to accede to his repeated request. Dr. Cleaveland will carry with him in his retirement the best wishes of his many friends. The successor of Dr. Cleaveland will be Dr. C. W. Pilgrim, who brings to his new field of work ample experience and tried energy.

Graduating without Commencement Exercises.—Bellevue Hospital Medical College finished its term and granted diplomas to one hundred and thirteen students without any formal exercises. The money usually spent in hall rent, music, flowers, and oratory was saved, we presume, for more practical ends. This is a utilitarian age.

A Bill to Appoint a Homœopath and an Eclectic on the Faculty of the University of Texas has been introduced into the Legislature.

A Central Academy of Medicine, including all the various independent medical societies, has been suggested for London. Sir Andrew Clark approves of the idea, but its practical fulfilment seems very difficult.

University Extension of Medical Studies.—The application of the university extension methods to medical studies was suggested by us in an editorial on this subject some months ago. The idea has been taken up by Dr. W. H. Harsha, who discusses the question in the *North American Practitioner*. He says truly that it is not practicable for a majority of physicians in the city to pursue successfully any studies at the schools, and at the same time carry on their practice, while there are many who could devote two or three evenings each week to study if it is brought within their easy reach. On the extension plan the choice of subjects can be made by the class, the courses can be made long or short, and the work can be done practically without loss of time and at the minimum cost.

The Connecticut Medical Law, which receives the endorsement of the leading medical men of the State, has advanced to a third reading and is likely to pass the Legislature. The proposed law, as will be remembered, is framed on the basis of the one now in force in this State.

Resignation of Dr. Joseph D. Bryant.—Dr. Joseph D. Bryant, Medical Commissioner of the Health Department of the City of New York, has resigned. During his term of service he initiated many valuable reforms in the department, and conscientiously and efficiently worked for the best interests of the public health. He will carry with him in his retirement the respect and esteem of his many friends. His successor will probably be appointed within the next fortnight.

The Action of Chloroform.—The discussion on this subject aroused by the report of the Hyderabad Commission continues, and a recent addition to it has been made by Dr. Lauder Brunton. This writer, after going over the experiments of Drs. Gaskell, Shore, and others, reaches the following conclusions: 1. That Drs. Gaskell and Shore are mistaken in regarding the fall in blood-pressure produced by chloroform as the most important question connected with its action. 2. Secondly, that the conclusions of the Hyderabad Commission are entirely unaffected by their criticism, which is directed to two things: (*a*) the effect of chloroform injected into the jugular vein, and (*b*) the pulse-tracings obtained during chloroform narcosis. In regard to (*a*), the error into which Gaskell and Shore suppose the Commission to have fallen was suspected by the Commission, and, as they believe, was avoided. In regard to (*b*), the criticism of Drs. Gaskell and Shore is not directed against the conclusions of the Commission but against comments made in the course of describing individual experiments. The tracings thus criticised were not considered as satisfactory evidence by the Commission, and were consequently not employed by them as a basis for their conclusions. 3. That they have devised a most ingenious plan of experiment by cross circulation and have obtained many interesting results. While these experiments may afford much valuable information, they are not entirely free from fallacy, as they were not performed on animals under the influence of chloroform alone, but under the influence of chloroform along with either morphine or chloral. 4. That they entirely confirm the conclusions of the Hyderabad Commission that the chief danger from chloroform is the concurrence of asphyxia, and that the most important practical point is attention to respiration, as maintained by Syme and Lister.

Women and the Medical Profession in Germany.—Herr Baumbach recently brought forward a motion in the German Reichstag that women should be admissible to the medical profession, and that for this purpose they should be allowed to present themselves for the Staats-Examen. There was some discussion on the subject, but the proposal on the whole did not meet with much sup-

port. The question will, however, come up again for discussion very shortly, on the occasion of the presentation of a number of petitions from various parts of Germany in favor of throwing the medical profession open to women. Already, it is stated, four ladies who have obtained medical qualifications abroad are engaged in practice in Berlin with sufficient success to encourage others to follow their examples.—*British Medical Journal.*

Professors Tizzoni and Centanni, of Bologna, report that they have been able to extract a protective vaccine for rabies from the central nervous system of rabbits dying from the *virus fixe*. They assert that their virus is equally sure and more convenient for use. It can, in fact, be administered by anyone; so that if what they say is true, Pasteur Institutes will not be needed in all parts of the world, since the vaccine can be distributed.

In the Treatment of Cholera Professor Hüppe, of Hamburg, speaks very highly of tribromphenol. He says that it has almost a specific effect on comma bacilli, and is not poisonous. Especially useful is a combination of it with bismuth, called tribromphenol-bismuth; this neutralizes the poison and protects the intestinal mucous membrane. It is given to the amount of from 5 to 7 grammes (℥j., gr. xvj.–℥j., ℈ij.) *per die* to adults, in doses of 0.5 to 1.0 gramme. Hüppe has used it not only in slight cases, but also in cases of moderate and extreme severity, and was very satisfied with the results. In fatal cases in which tribromphenol-bismuth had been used the kidneys were much less affected than they usually were found to be. Next in value as a remedy is calomel. Hüppe concludes with some remarks on the use of large injections of saline solutions. They mostly have a good effect, but this result is not lasting. The reason of this is that all grave symptoms of the vascular system are not caused by the loss of water, but by the action of the poison on the heart-muscle and on the vaso-motor nerves. The solution, therefore, cannot repair the injury already done by the poison, but it dilutes the poison and carries off the products of metabolism. Moreover, it stimulates the heart's action, and the organism gains time to struggle with the poison, and sometimes even this temporary relief leads to recovery. For these reasons, and also because this interval affords an opportunity to strengthen the patient with food and medicine, the injections—subcutaneous as well as intra-venous—are of very great help in severe cases.

Literary Work of American Physicians in 1892.—During 1892 the number of new works on medicine and hygiene published in the United States was 128, being an increase of 20 as compared with 1891. In a classified list of new works published in the United States last year, medicine stands thirteenth in point of numbers in a total of 19 classes—a fact which seems to show that literary over-production cannot fairly be charged against the medical profession in America.—*British Medical Journal.*

Prurigo Secandi, or perhaps we should say *cacoethes secandi*, prevails in France as well as elsewhere. Professor Leon Le Fort, Professor Verneuil, Professor Duplay, and Professor Tillaux have been asked by a public journal for their opinions on the operative mania (*furie opératoire*) said to be prevalent at present. Professor Le Fort says it is much more widespread in France than in other countries; and in a long letter he protests against the custom among the young French surgeons, in order to bring their names before the public, "to seek out some operation unknown in France, then seek out a victim on whom they can perform it, in order to report it before a medical society, and perhaps also show the patient." Then, says M. Le Fort, they take up the operation as a specialty, perform it on a hundred or two hundred patients, and thus gain a reputation. Professor Verneuil protests against the abuse of operations in general, and especially of gynecological operations. He deplores the *prurigo secandi* with which so many of the French surgeons are attacked. Professor Duplay and Professor Tillaux express the same opinions.

A Land without a Microbe.—The most ideally sterile spot is undoubtedly the moon, but on this particular planet the Spitzbergen group of islands, in the Arctic regions, are found to be a close second. During a recent sojourn there M. Coutsaud took the opportunity of studying the bacteriological peculiarities of these ice-bound spots. Analysis of the air, water, and soil of Spitzbergen brought to light the extraordinary poverty of these regions in bacteria. While, according to Miquel, the air of the streets of Paris contains on an average 51,000 bacteria, that of the Arctic Sea contains only three per cubic metre. As to the water of Spitzbergen, not only is it devoid of any pathogenic micro-organisms whatever, but all bacilli are absent. In the water of the island of Jean Mayen, however, there were discovered the bacterium termo and a few short and mobile bacilli. The bacillus subtilis, so commonly met with in the different countries of Europe, was undiscoverable in the soil of those regions. At Jean Mayen there was found in abundance a leptothrix composed of long filaments, irregularly twisted, about one μ in diameter, producing elliptical and highly refracting spores. This species grows on gelatine into dense colonies, which possess no liquefying properties, but develop during growth a characteristic brown coloration.

What I Know about a Prescription Filled by Myself.—In these days of patent and proprietary medicines and ready-made formulæ, the following remarks of Dr. Liesman, in the *Medical Summary*, may be read with profit: 1. I know what it contains. 2. I know how much of any and all drugs it contains. 3. I know that it contains what is called for. 4. I know that it is compounded carefully and properly. Who will do my work more carefully than I myself? Who is so much interested in my success as I myself? 5. I know that it is filled and delivered at the right time. 6. I know that when it is all gone the patient will call on me, and have it refilled if he needs more, when I can give further directions, or change it if I see fit. 7. By filling my own prescriptions I deal the patent-medicine fraud a powerful blow.

An Hospitable Town.—There is an association of physicians and surgeons in Philadelphia organized for the purpose of showing courtesies and attentions to visiting physicians.

The German Naturalists and Medical Men will hold their annual meeting in Nuremberg from September 11th to September 16th. Professor von Helmholtz will deliver an address.

Society Reports.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 8, 1893.

H. P. Loomis, M.D., President, in the Chair.

Destruction of a Portion of the Optic Lobe Secondary to an Old Cortical Hemorrhage.—Dr. H. P. Loomis presented such a specimen. The patient was a woman sixty years of age, who was admitted to the Almshouse Hospital as an inmate of "the blind ward" on February 29, 1892. She was apparently slightly demented, could give no history of herself, nor could she tell where she was. She talked incessantly, but at random, though using exceptionally good language. Insomnia was a constant symptom; there was no paralysis, and no interference with locomotion. There was slight nystagmus, and vision was almost completely lost. She remained in the hospital in this condition for about a year, when she developed a diarrhœa which persisted until her death, at the end of three weeks.

The autopsy was made thirty-six hours after death, and revealed no lesion of any organ except the brain. The middle and inferior convolutions of the occipital, and the posterior portion of the inferior convolution of the temporal lobe of the right hemisphere had entirely disappeared, apparently as a result of atrophy. In the centre of the pia mater which covered the depression caused by this loss of brain-substance, was a soft, brownish, encysted mass, the size of a small olive, which contained some cheesy material in which were found crystals of cholesterine. The brain-substance surrounding the destroyed area was normal in appearance and color. There was also a softened area, about an inch in diameter, over the parietal lobe (supra-Sylvian convolution) on the right side. With these exceptions the brain was normal, and the arteries showed no evidence of disease. The dura mater was somewhat thickened over the atrophied area.

A study of this case makes it probable that a year or more before the patient's death there was a cortical hemorrhage over the occipital lobe, probably of traumatic origin, which by pressure caused atrophy of the underlying brain-tissue. The clot finally became encysted, and resulted in the cheesy mass. The case is interesting as showing by the limited lesion found, and by the eye-symptoms present during life, that the localization of the sight area as now accepted is confirmed by the post-mortem examination.

The Plasmodia of Malaria.—Dr. J. S. Thacher exhibited fresh specimens and stained ones of the plasmodia, which had been found in great abundance in the blood of a patient in the Presbyterian Hospital, in the service of Dr. Northrup.

The patient was a steward on the steamers running between New York and New Mexico, and he had first had chills about two years ago. They ceased to recur after three or four months, and did not trouble him again until early last November, just after a return voyage to New York. Between this time and that of his admission to the hospital, on January 24th, he had frequent chills at irregular intervals. During his stay in the hospital he has had two or three irregular rises of temperature, at one time to 104° F., but there was no chill with these elevations of temperature. He was given occasional doses of phenacetin during the first week, and after that he received ten grains of quinine three times a day. Since he has been taking the quinine there has been no rise of temperature, but the parasites have been continuously present in his blood, although in steadily decreasing numbers. The crescentic forms have been almost exclusively present, although there have been some of the round pigmented, extra-cellular plasmodia, and some of the flagellated bodies. The latter were very abundant on the day the quinine was begun, but since then they have been only occasionally present. The intra-cellular plasmodia have not been observed in this case, except possibly on one occasion.

Two methods of preparation have been followed, viz.: one was to take a minute drop of fresh blood on a cover-glass, squeezing it on to a slide so as to flatten out the red blood-cells and so enabling the observer to more easily see the plasmodia. The other method was to obtain a very thin and quick "smear" by touching the edge of a slide to a drop of fresh blood, and then wiping it quickly across a cover-glass, then passing it through the flame just as is done in staining sputum, after which it was stained with methylene blue.

The number and character of the plasmodia have not varied much with the time at which the examination was made, although Laveran found them almost constantly present if the blood were examined just at the beginning of a paroxysm, occasionally absent if the examination were made toward the end of the paroxysm, and quite often absent when the examination was made during the interval. Although this patient has not had any elevation of temperature for over a week, there is still a number of crescents found in his blood. The speaker thought that most cases diagnosticated as malaria, and running a fairly typical course, would show the presence of the plasmodia, but, of course there are many cases called malaria by some physicians which do not show them.

Dr. Le Boutillier asked if the plasmodia had been observed outside of the body?

Dr. Thacher replied that they had been extensively studied in the lower animals, and that quite similar growths had been found as parasites of plants.

Dr. J. M. Byron said that the well-known clinician, Professor Bacelli, of Rome, a very excellent authority on malaria, states that he has been unable to find the plasmodium in cases which he had diagnosticated as malaria, and which proved afterward to be typical cases of the chronic form of this disease.

Dr. Henry S. Stearns then gave a lantern exhibition in which he showed many interesting photo-micrographs of various pathological conditions, after which the Society went into executive session.

Stated Meeting, February 22, 1893.

H. P. Loomis, M.D., President, in the Chair.

Appendicitis.—Dr. W. P. Northrup reported a case of appendicitis with some unusual clinical features, and exhibited the appendix and specimens under the microscope. The patient was a man, thirty-two years of age, who was very ill last summer, for a period of six weeks, with what the physician in attendance at that time supposed to be an attack of peritonitis. When the speaker first saw him in the fall, he was extremely pale and emaciated, and looked to be a subject of tuberculosis. On the morning of January 24, 1893, the patient had two natural stools, and about noon began to have cramps over all the lower part of the abdomen. He was seen by the speaker at 6 P.M., just after he had had a chill and had vomited. The axillary temperature was 101° F., and there was some tenderness low down in the right groin. The diagnosis was made of appendicitis. At 4 A.M., on January 25th, he was reported to have had another severe chill, and two hours later he vomited some greenish water, and the axillary temperature was 103.5° F. There was another slight chill at 1 P.M., followed by a temperature of 104° F. The patient was slightly delirious and had the appearance of one suffering from septic poisoning. After consultation with Dr. Lange, who agreed in the diagnosis that an abscess had formed, and was on the point of rupture, or that possibly even some leakage had already occurred, an operation was immediately undertaken. The appendix and a portion of the cæcum were found of a dark purplish color, and there was beginning gangrene of the mucous surface, so that after ligating and removing the appendix, the wall of the cæcum was invaginated and the two peritoneal surfaces sutured to-

gether, so that in case of sloughing of the wall of the cæcum, the slough might escape into the bowel. On section the appendix was found to be empty, its mucous membrane was the seat of gangrene, and the solitary follicles were ulcerated. These changes were not at all extensive, and were confined to the cæcal extremity of the appendix. Since the operation, convalescence had been uninterrupted.

A Dissecting Aneurism of the Ascending Portion of the Arch of the Aorta.—Dr. F. Ferguson presented a specimen of a dissecting aneurism of the ascending portion of the arch of the aorta which had been taken from a man, thirty-six years of age, who had been apparently in perfect health up to two days before death, when he suddenly felt ill while on his way to business. On admission to the hospital, he complained only of feeling greatly prostrated, and no physical signs were observed pointing to any pathological condition of the heart or lungs, and the heart-action was slow and vigorous. His urine contained a trace of albumin. He passed a restless night, but early the following morning felt somewhat better. At 11.45 A.M. he suddenly fell dead. At the autopsy the lungs were found to be fully aerated, and the kidneys showed chronic congestion. There was a rent in the aorta, 3 ctm. in length, the lower end of which was about 1 ctm. above the aortic valve. It involved the intima and the middle coat of the vessels, and from this point the artery was dissected toward the heart and downward as far as the bifurcation of the iliac arteries. In addition to this, there was a rupture into the pericardium about one fourth of an inch in diameter, almost at the junction of the vessel with the heart. Through this about six ounces of blood had escaped into the pericardial cavity, and found coagulated at the autopsy.

The case was of unusual interest both on account of the vessel showing no evidence of degeneration, and also because of the great size of the rent.

The Lesions of Typhus Fever.—Dr. William G. Le Boutillier presented a spleen which had been removed from a typhus-fever suspect. The patient had an eruption and all the symptoms of typhus fever, and at first there was no evidence of pneumonia. On the following day, however, the physical signs indicated consolidation of the entire lung on one side, and at the post-mortem examination, held four days later, it was found that this lung was in the stage of gray hepatization. With the exception of some decolorized clots of fibrin in the heart, the blood was very dark and tarry. The spleen was large and quite soft. The lower portion of the intestine was very much injected, and showed distinctly the "shaven-beard" appearance. The case was presented chiefly with the idea of ascertaining the opinion of the members as to whether or not this really was a case of typhus fever.

Dr. J. W. Brannan said that last spring he had made four autopsies on undoubted cases of typhus fever. In these cases the intestine showed no lesions whatever, the lungs showed hypostatic congestion, and the spleen was very large and soft, but the appearances were altogether negative. Acute degeneration of the liver and kidneys was the most marked feature in all the cases.

Dr. J. M. Byron said that in 1881 he saw about seven thousand cases of typhus, and made autopsies on about three hundred and fifty of these cases, and although in all these examinations a special search was made for anything which might be considered characteristic of the disease, no such post-mortem evidence was obtainable. Sometimes the intestine showed the rosy appearance already mentioned. The spleen was enlarged as it is also in all infectious diseases, and in a large proportion of cases there was some croupous pneumonia, usually in the lower lobes; but in almost all depressing diseases, if they be sufficiently protracted, this condition will be found. The blood was usually dark and fluid, but no more so than is often observed in other infectious diseases.

Dr. George P. Biggs said that his post-mortem observations of typhus-fever cases accorded with those of the last speaker, except that he had not found pneumonia especially common. There was nothing unusual about the appearance of the intestine, the spleen was invariably large, there was usually acute parenchymatous degeneration of the heart, liver, and kidneys, particularly of the latter. The blood was very dark and fluid. From the appearance of the spleen, which had been presented, he would be inclined to think that in addition to the lobar pneumonia there must have been some infectious process, so that the post-mortem findings, when taken in connection with the clinical history, pointed strongly to typhus fever.

Renal Calculi.—Dr. Le Boutillier also presented a kidney showing three calculi in its pelvis. The largest was branched and of irregular shape, and measured about 10 × 18 × 30 mm., and weighed 4.5 gm. There were two small calculi weighing together 0.6 gm. They were situated in the most dependent portion of the pelvis of the kidney, and with the exception of the facets they had a smooth surface. The ureter was normal, as was also the bladder, which contained no calculus. The calculi in the kidney were of a dark-brown color, and appeared to consist of uric acid. The kidney itself showed cloudy swelling from the intercurrent disease which caused death, but there were no suppurative changes.

Chronic Interstitial Pneumonia.—Dr. J. W. Brannan exhibited the lungs from a man, sixty years of age, who about one year ago had been discharged from Bellevue Hospital with a diagnosis of "fetid bronchitis," and had been readmitted within the past few weeks with very much the same symptoms as he presented on previous occasion. This time on admission his temperature was 103° F., and the physical signs pointed to an empyema on the right side. The expectoration was fetid, but no bacteriological examination was made of the sputum. On February 6th, portions of two ribs were exsected, and a large quantity of offensive pus evacuated. The temperature fell and remained down for two days, but then rose notwithstanding the existence of free drainage and a diminution in the fetor. He finally died of exhaustion, and the autopsy was made to-day. The right pleural cavity was obliterated, and the right lung, instead of being tubercular, as had been surmised, presented the appearance of one which was the seat of a chronic interstitial pneumonia. With the exception of some emphysema and congestion, the left lung was normal. There was no evidence of tuberculosis elsewhere.

The right supra-renal capsule was also exhibited, and appeared to be in a state of fatty degeneration. The specimen was referred to the Committee on Microscopy for examination.

Fatal Pyæmia following Incision of a Urethral Stricture—Biological Peculiarities of the Staphylococci Pyogenes Aureus.—Dr. T. M. Prudden read a communication on this subject. The patient was a man, twenty-four years of age, who had been operated on for urethral stricture, and who on the day after became delirious and had a temperature of 106.6° F. His urine also contained six per cent. of albuminuria, with pus and granular casts. The autopsy showed the heart and lungs normal, and the kidneys of normal size but studded with petechiæ and abscesses. The peritoneum and the mucous membrane of the bladder also showed petechiæ. On microscopical examination the kidneys were seen to contain many small abscesses, with cocci and numerous bacterial emboli in the smaller vessels. Cultures from both the kidneys and the spleen showed large numbers of cocci, which exhibited several important variations in metabolism, not only being very slow in fluidifying gelatine, but their peptonizing powers were very feeble. A series of culture experiments were made, extending over a period of six months, and as a result of this study it was proved beyond question that they were the staphylococci pyogenes aureus. As a proof of this the speaker exhibited culture-tubes demonstrating the fact that they had regained their normal powers.

Dr. Byron said that these observations concerning the

metabolic characters of the staphylococci were exceedingly important, as showing that such characteristics were not sufficient ground in themselves for the division of bacteria into species.

A Cyst of the Brain.—Dr. J. H. Huddleston presented a brain showing a cyst occupying the ascending parietal convolution. The specimen had been removed from a patient who had died very suddenly at the almshouse. The left side of his body had been paralyzed for some years.

The heart from the same patient showed a parietal thrombus occupying the left auricle. It was five centimetres in diameter, globular in shape, and its base of attachment was about the size of a half-dollar.

Solitary Tubercle of the Liver.—Dr. George P. Biggs presented a liver which had been removed from a woman, seventy years of age, a patient in the almshouse. No detailed history could be obtained, but it was learned that she had had attacks of jaundice, at intervals, for several years, the last one being accompanied by high fever. The liver showed a nodule, about the size of a hen's egg, projecting from the upper border of the liver, and slightly adherent to the diaphragm. It was distinctly outlined by a layer of dense fibrous tissue, and in the recent state it presented an appearance very much like that of a gumma. The liver also showed moderate fatty fibrous change, with marked dilatation of the gall-ducts; the gall-bladder contained many gall-stones, and there was suppuration in and about the gall-bladder. The lungs showed a few tubercular nodules at each apex, and also in the upper portion of the middle lobe, and there was a small spot of pneumonia beginning to suppurate. The kidneys were the seat of advanced chronic diffuse nephritis. The liver in the fresh state was examined for bacilli, but none were found, yet sections of the tumor, when examined under the microscope, showed typical tubercular tissue. It was quite a typical specimen of what some writers have called "solitary tubercle" of the liver.

The Society then went into executive session.

Therapeutic Hints.

Chloro-sulphate of Quinine has been introduced, especially for hypodermic use, as it is soluble in its own weight of water and causes less pain than the sulphate or hydrochlorate.

Bromide Eruptions and the tendency to digestive disturbances where large doses must be given, are counteracted by Féré, who gives a drachm of beta naphthol and half a drachm of salicylate of bismuth, daily, and finds that this can be administered for months together without injury.

Cystitis and Acute Vesical Catarrh, following gonorrhœa, have been successfully treated, according to report of Oke-Blom, by instilling with Guyon's instrument, every second or third day, from one to six cubic centimetres of a solution of iodoform, one part in seven parts each of ether and olive-oil.

Universal Pruritus has been relieved by Lange with internal administration of bicarbonate of sodium along with lithium carbonate. For itching in the genital region, carbolic acid compresses were employed.

Adeps Lanæ that does not meet the requirements of the Pharmacopœia leads to disappointment. Passmore and Helbing find lanolin of such purity as to be a stable and almost ideal ointment base, and the best for the external administration of mercury. Biniodide and ammoniated mercury ointments will keep for years, while if made with lard or paraffin they will not keep for the same number of weeks.

Nitro-glycerine in large dose is recorded by Dr. Himmelsbach as having been used by a patient in the Buffalo General Hospital for precordial pain. Paroxysms could be anticipated by about two minutes, when, if a large dose (from six to twenty of the $\frac{1}{100}$ triturates) to which the patient had accustomed himself, was taken, the attack would be lessened if not dispelled.

Urticaria of Children.

℞. Chloral hydrat.,
Pulv. camphoræ,
Pulv. gummi arabic..... .. ..āā ʒj.
Triturate to liquefaction and add
Cerat. simplicis..... ʒj.
M. S.: Apply topically.

L'Union Méd., No. 130.

Pyoktanin and Boric Acid, in proportion of ten per cent. of the former, is found to be the most ideal and effective germicidal antiseptic yet presented for the cure of primary gonorrhœal vaginitis. After cleansing thoroughly with hot water in the Sims position, the cavity is freely and liberally dusted, and the vagina is packed with any mild antiseptic gauze to the hymen.—*Hulbert.*

Cocaine is best dissolved in a one-half per cent. boric acid solution.—*Squibb.*

Tincture Gelsemium in dose of three drops every four hours, it is said, will relieve spasmodic stricture of the urethra.

Menorrhagia and Metrorrhagia have been controlled by hypodermic use of atropine in one two-hundredths of a grain dose, after other hæmostatics had failed.—*Dmitriuff.*

Labor Pains are brought on, Freund claims, by galvanism applied to the mammæ (cathode), and abdomen (anode): five to seven milliampères being employed.

Buboes are successfully treated by drawing off the pus through a small incision and injecting the cavity with ten per cent. solution of iodoform in liquefied vaseline. Le Jollec mentioned this plan in *La Sem. Méd.*, No. 55, 1891. Dr. Otis took it up in this city and has reported good results, and Dr. Allen has mentioned his success with the same method at the City Hospital.

Pneumonia.—Acetanilid, gr. v., and camphor, gr. xx., in capsule every four hours, has been advised.

Piperazine.—Biesenthal affirms that the consensus of opinion is in favor of the use of piperazine in recent cases of gout, and that even in chronic forms of the disease its action is almost always favorable. Continued small doses—from fifteen to forty-five grains a week—constitute a sure prophylactic. The remedy has proved valuable in renal colic and in hemorrhage from the urinary tract. The last-mentioned disorder, even when of years' standing, has been entirely relieved.—*Exch.*

Ozone has been employed in the treatment of phthisis by Dr. Norris, of this city, who reports very favorable results, especially in catarrhal phthisis not far advanced in the second stage and limited to a single lobe, or, if in both lungs, confined to small areas. In every case where these conditions existed improvement was immediate and progressive. It was administered in the form of aquzon, twelve ounces being given during the day in four doses, one before each meal and at bedtime.

Testicular juice is believed by Brown-Séquard to possess special tonic properties which increase certain active powers of the brain and cord. When injected with precautions to avoid auto-suggestion, in a variety of debilitated conditions, especially in the aged, it increases the transformation of energy to which are due the various powers of the spinal cord and brain.

Eczema without oozing Veiel treats with dry cold, such as is secured by an ice-bag wrapped in cloths. Glycerine jellies are also advised. In weeping cases dusting powders are best. In chronic eczema salicylic soap plaster, and where the nervous system is involved tar upon patches which are dry. A tar ointment may be gradually increased from one to fifty per cent.

Cinnamic Acid in lupus and tuberculosis has given Lauderer good results. In 45 surgical tuberculosis cases treated by

R. Cinnamic acid	1 part.
Cocaine hydrochl	1 part.
Alcohol	20 parts.

of which one or two minims are injected about each nodule, 31 were cured, 7 improved, 1 not improved, and 2 died.

Putrid Diarrhœa.—Beaumetz says the intestine should be flushed by rectal injections penetrating as far as possible, and containing one part in a thousand naphthol or ten boric acid.

Diabetes.—The beneficial effects of codeia in controlling the amount of sugar has long been known. Bruce has shown that morphine may act equally well in some cases. Ralfe prefers the latter because of its uniformity and greater power, but believes that to obtain the full benefit of opium some of its other derivatives should be combined with the alkaloids. Thus acetate of morphine in solution may be added to liquor opii.

Lyzygium Jambolanum in dose of a gram and a half to two grams daily, increased every third day to four, six, eight, ten, twelve grams, and so on for a month or more, or until the patient had taken two hundred grams of the liquid extract, corresponding to one hundred grams of powdered seed, was given to a diabetic patient by Drs. Raimondi and Rossi (*Gaz. Med. Lomb.*, January 16, 1892). Polyphagia was diminished; polydipsia and polyuria not so much. Sugar decreased from twenty-five to twelve per cent. There was gain in weight and general improvement.

Tetanus in a child was treated by Celli with nine hypodermic injections, each containing, it is said, five centigrams of corrosive sublimate. At the end of a week the child was well.

Salicylate of Soda has been found by Meynier to give prompt relief in gonorrhœal inflammation about the neck of the bladder. A dose should be given every hour, and during the day as much as from six to ten grams. This is gradually decreased to three grams daily as soon as symptoms abate (usually by the second day).

Prurigo of Hebra is treated, according to Saalfeld, with Wilkinson's ointment, or a two to three per cent. naphthol ointment and baths containing tar. In severe cases he thinks injections of pilocarpine might succeed.

Lupus Nodules can be caused to disappear, Unna believes, by repeated active cauterization with carbolic acid.

Seborrhœal Eczema of the lips and regions about the mouth is treated by Dubreuilh with this ointment:

Vaseline	40 grammes.
Oxide of zinc	8 "
Washed sulphur	4 "
Salicylic acid	1 gramme.

Coryza is relieved with the following snuff, of which Coupard says to take a pinch of five or six times a day:

Cocaine hydroch	0.15 centig.
Menthol	0.25 "
Ac. boric	2.00 gram.
Finely powdered coffee	0.50 centig.

Petroleum applied to the whole surface of the body, it is said, will cure the itch in three days.

An Electrical Bath for the speedy introduction of mercury into the system has been invented by Gärtner and employed by Kronfeld, in Vienna, with favorable results, and is spoken of as being reliable, rapid, and easily applied. Patients thus treated excreted more mercury by the kidneys than when otherwise administered.

Thymolo-salicylate of Mercury is well spoken of by Neumann, as not producing pain or infiltration in hypodermic use, not decomposing, not being difficult to employ, and not requiring over six to ten injections to cause disappearance of symptoms.—*Journ. Cut. and Gen.-Urin. Dis.*

Gonorrhœa.—

R. Campho-phenique	ʒ ss.–ʒ j.
Iodoform	j.
Albolene	ʒ ij.

S. Inject.—*Chancellor.*

Cerebral Action of some Medicaments.—Krœpelin says that a given drug has a different action on sensory and motor functions. Thus: 1. Alcohol in small doses impairs the sensory functions and excites the motor ones; in large doses it first aids the motor processes, then abolishes them. 2. Paraldehyde causes difficulty of the sensory functions and aids the motor processes, then rapid paralysis of these last. 3. Chloral impairs both sensory and motor functions. 4. Ether rapidly paralyzes sensory processes and excites motor; in large doses it increases the sensory paralysis, and eventually abolishes motion. 5. Chloroform has a similar but more rapid action. 6. Amyl nitrite causes excitement of the motor functions, slight paresis of the sensory processes. 7. Tea greatly facilitates sensory processes, after a time depressing them, but has little effect on the motor functions. 8. Morphine causes at first enormous excitation of sensory functions, but subsequent rapid depression; it causes marked and persistent paralysis of motor functions.—*British Medical Journal*, August 27, 1892.

Erythema Multiforme, in three cases associated with pregnancy in Dr. Dockxell's practice, was quickly relieved by ichthyol in eight-grain doses, given three times daily.

Chyluria depending upon filariæ has been cured in two cases, reported by Dr. Lawrie, of Hyderabad, by the internal use of thymol.

Hyperidrosis Pedum.—Apply, after thoroughly washing:

Acid talicylic	1
Precipitated chalk	3
Talcum	6

Political Insanity.—The Berlin correspondent of *The Lancet* says that "in the new edition of his book on forensic psycho-pathology, Professor von Krafft-Ebing has added a chapter on 'Political Insanity,' from which the following is a quotation: 'In history and in our own time one comes upon large numbers of people who, discontented with social arrangements, feel called upon to better the world. There are innumerable such pseudo-geniuses in society, both in the harmless province of important inventions and proposals for the public good which prove in the light of criticism to be mere vain desires or Utopias. The clinical marks of these abnormally constituted persons are infinitely various. In many the mental endowment is weak and their intellectual productions bear the stamp of crazy eccentricity which clearly distinguishes them from those of genius. Many such remain all their lives in the stage of abnormal world-menders and pothouse politicians, but from the suggestions of others or the influence of excited times they are apt to lose the remnant of their discretion. Then they feel impelled to convert their ideas into action. They appear in the *rôle* of tribunes of the people, leaders of rebellions, founders of sects or political parties, and plunge themselves and others into misfortune.' Further on he says: 'Such unfortunates fall at last into complete megalomania, and if they obtain power for a time they use it in accordance with their degenerate natures as tyrants. . . . If they are placed in lunatic asylums they regard their sequestration as actuated by envy and fear of their great talents and go on cultivating their "ideas," awaiting the time of their realization. Their final fate is extreme megalomania, confusion, psychic debility.'"

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

LECTURES—ANNUAL MEETING OF THE OBSTETRICAL SOCIETY—HYPOTHESES—LIGATURING THE PEDICLE—LEPROSY — OSTEO MYELITIS — COLOTOMY — RUPTURE OF URETHRA—LUPUS—FRACTURES IN TABES DORSALIS—SUPRA-PUBIC PROSTATECTOMY—THE COLLEGE OF PHYSICIANS AND THE MEDICAL COUNCIL—THE ELECTROPATHIC COMPANY AGAIN—ANOTHER SPECIAL SOCIETY—SMALL-POX AND INFLUENZA IN LONDON—DR. HAWKSLEY'S BEQUESTS.

LONDON, March 10, 1893.

We have been having a plethora of lectures lately. Besides those mentioned in previous letters, the three courses at the Royal College of Physicians come at this season—the first being already over, the second more than half over, and the third will soon commence. Then the post-graduate courses and the annual addresses at the societies are sufficient to satiate the most hungry devourers of this kind of mental pabulum.

At the annual meeting of the Obstetrical Society Dr. Herman, as President, gave an inaugural address, in which he rather "chaffed" the builders of hypotheses, with a view of enforcing the lesson that in every department of science the record of progress has been marked by the substitution of direct observation for hypothesis, and of exact for loose observation. He also discussed the propriety of giving more time to the exhibition of specimens and less to the reading of papers. This question has also excited attention elsewhere, and there appears to be a tendency to appreciate practical demonstrations and the exhibition of living cases, as well as pathological specimens, more highly than elaborate essays or theoretical papers.

After Dr. Herman's address Mr. A. Doran showed an ovarian cyst pedicle obtained from a patient, who died of phthisis eight years after the operation, and from this an interesting discussion arose as to the best ligatures to employ, there being a general assent to the disposition that the earlier ovariotomists were right in their preference for securing the pedicle by ligature. One speaker mentioned a case in which the pedicle was so rotten that the first ligature, rather a thin one, cut through at once: a second, a thicker one, and a third, still thicker one, did the same. A subsequent speaker, having tied a very short pedicle twice without arresting the hemorrhage, left on a pair of broad forceps for forty-eight hours with a good result.

At the Medical Society of London, the President, Mr. Hutchinson, showed a patient, on February 27th, who had been under observation for three years with leprosy, and he considered was now almost cured. He had been treated with arsenic and the exclusion of fish from his diet. Mr. Hutchinson reiterated his well-known views as to fish, which, however, do not seem to convince many. A child, aged two, who had had acute septic osteo-myelitis of each shoulder, was shown by Mr. Owen. Resection of each shoulder had been performed, and free movement of each was obtained; and Mr. Owen advised prompt treatment in such cases, though of course he admitted, in reply to a question, that the growth of the bone had been sacrificed to save the child's life.

A married woman, aged thirty-one, was exhibited by Drs. Goodsall and Hall. She had been operated on for piles in 1883, for fistula and ischio-rectal abscess in 1884. In 1886 stricture of the rectum came on, and in March, 1890, evidences of syphilitic infection were noticed. In 1892 the pleura was tapped thirteen times, and afterward colotomy had to be performed. In October, 1892, she was discharged in good health. Asked why mercury had not been given, Dr. Hall said he did not approve of that treatment.

Mr. Gould showed a man whose urethra he had sutured after he had been completely ruptured by a fall. Dr. Cautley showed a woman, aged twenty six, who had suffered from enlarged spleen from the age of eleven. It now reached down to the right iliac fossa.

Dr. P. S. Abraham showed a very interesting case—a woman with an extensive patch of brawny thickening on the face, involving nose, cheeks, and forehead. It had well-marked borders, and Dr. Abraham observed that the diagnosis lay between syphilis and lupus. Mr. Hutchinson inclined to think it lupus, or, if of a syphilitic taint at all, as a syphilitic lupus. Dr. Fox disapproved of such a term, as he regarded lupus as tuberculous: he would admit such a term as "lupiform syphilide." It was suggested to test the character by injecting tuberculin, but Dr. Abraham had found his patient very adverse to any active treatment. Five or six other patients were also presented at this instructive meeting.

At the last meeting of the Medical and Chirurgical Society the subject of fracture of long bones in tabes dorsalis and other diseases was treated in a paper by Mr. Rivington. He related five cases of fracture from slight causes in patients aged respectively forty-two, forty-six, fifty-one, fifty-five, and fifty seven. They all occurred in the vicinity of joints, all in the prodromal stage, before the onset of ataxic symptoms, and were due to atrophy and rarefaction of the bones without inflammatory changes, which were conspicuous in the articular ends of the bones in the joint disease. In one case, seen several years afterward, the callus thrown out at first had been absorbed. In two other cases union had occurred. Formerly these cases were called fragilites ossium, and even now it is doubtful whether surgeons are sufficiently alive to their association with tabes; for although Charcot's ataxic joint disease is often spoken of, we do not often hear of ataxic fractures. Mr. Hulke read the notes of a similar case in a woman, aged thirty-four, and said the pains in the lower limbs, with numbness, an associated perforating ulcer, and gastric crises, showed the nature of the case. Dr. Buzzard said that Dr. Benjamin Ball was the first to note that visceral crises were common in tabic arthropathy. He had suggested that gastric crises, which were strictly analogous to lightning pains, were due to sclerosis of the nucleus of the vagus—a suggestion now admitted to be a fact. Spontaneous fracture or arthropathy cannot be due to disease of the cord, as many cases of tabes occur without them. We do not meet them in infantile paralysis, or in sclerosis of the lateral or anterior columns, and so we must look to the medulla. Other speakers remarked that syphilis did not cause fragility, except indirectly by gumma or nerve lesion, and that fractures were scarcely ever met with in other forms of paralysis. But it was also said that the bones were often broken in paralytics, but readily united again. If union occurs in tabes, it is with a low type of callus which may be reabsorbed, as shown by Mr. Rivington.

Supra-pubic prostatectomy formed the subject of the paper at the Medical Society, on the 6th inst., by Mr. Buckstone Browne, who recommends the operation when from certain causes "catheter life" becomes intolerable. On the other hand, he admits it ought never to be performed at the outset of catheter life unless regular catheterism is impossible, nor, indeed, as long as ordinary catheter life is really tolerable. He says there is some prospect that the power of natural micturition may be recovered after the operation. Mr. Hutchinson supported the cautious conclusions of the author, and related a case in which, in the course of a cystotomy, he had brought away a piece of prostate with the stone, and was thereby induced to clear the floor of the bladder. The result was excellent, inasmuch as the patient had never since been obliged to use the catheter. Several speakers condemned the use of silver catheters in prostatic cases, and Mr. B. Browne said that rubber ones were certainly to be preferred, but in some few cases it was impossible to effect an entrance into the bladder without the metal catheter.

The Royal College of Physicians has succeeded in its action against the Medical Council, the Court having

pronounced judgment to the effect that the College is qualified to grant diplomas both in medicine and surgery.

The Medical Battery Company has again been in court, and Mr. Harness has again come off second best. After the action against the *Electrical Review*, which I have already noticed, a circular was sent to news-agents warning them that the *Review* contained libellous articles. The *Review* promptly sued the company, and a jury has given it £1,000 damages. Perhaps this will teach Mr. C. B. Harness and his Battery Company a lesson, and open the eyes of the conductors of respectable journals as to their own conduct in distributing broadcast advertisements of what they must now admit to be a cruel imposture.

A second laryngological society has been launched here. The object is not stated to be as a rival to the other, but dark hints may be heard that the new one is to be eminently respectable. The elder one suffered in its earliest stage from a secession of a number of the most eminent members, and lately they have been invited to rejoin. I cannot say how many have done so, but a comparison of the lists shows that some names are conspicuous by their absence from both.

Small-pox still threatens us, and although we consider the season for it to be hastening to an end, we know well enough that the dread disease does not rigorously abide within the averages taught by epidemiologists. The last fortnightly statement gives 171 cases in hospital, against 130 of the previous return. Last week 5 deaths were registered in London, some 50 new cases, and there were 180 in the hospital ships. Yet the anti-vaccinationists are as blatant as ever, although their stronghold, Leicester, has been invaded, and enormous cost incurred in the effort to isolate, etc.

Influenza, too, is threatening—the weekly mortality from the disease rising to 40 from 19, 27, and 35. Mild cases are very numerous, especially in children.

The late Dr. Hawksley left £1,000 per annum to the National School of Handicraft for Boys, of which he was the founder, and on which he spent some twenty thousand pounds in his lifetime. He also bequeathed other sums to medical charities.

OUR BERLIN LETTER.

(From our Special Correspondent.)

PROFESSOR DU BOIS REYMOND'S FIFTIETH DOCTOR'S JUBILEE AND A. HIRSCH'S CELEBRATION—PHOTOGRAPHY APPLIED TO THE INTERNAL BLADDER—PEANUT AND ITS PREPARATIONS OF USE AS A NEW ALBUMIN AND CHEAP NOURISHING SUBSTANCE — PROFESSOR HÜPPE'S RECOMMENDATIONS FOR PREVENTION OF CHOLERA ASIATICA.

BERLIN, February 26, 1893.

WITHIN the last few weeks two celebrated men, E. Du Bois Reymond, the great physiologist, and August Hirsch, the great historian, celebrated their fiftieth medical anniversary.

A few points from the speech of Du Bois Reymond, in answer to Rudolph Virchow, the present rector of the Berlin University, may be of interest. Du Bois began by saying that he was one of the poorest scholars at college, and loved drawing and poetry more than anything else. He played very much with electricity, but did not go deeply into it, as he intended to be an artist. In 1837 he went to the university and matriculated in the philosophical faculty, and also in the theological department. In this way, in 1837, he accidentally went to Midscherlich; he there saw his experiment-table with its nice preparations, and he at once resolved to follow this up. He then went to Bonn, studied geology, later mathematics, without progressing. In the Eiselen's Turnhall he, with Heinz, Werner, Seemens, and Kollicker, met Edward Hahman, a medical man, who pointed out the right method of studying physiology by commencing the study of medicine. In 1839 and 1840 he and Virchow studied anatomy under Johannes Müller, and in the following summer physiology. Müller allowed Du Bois to work with him in that miserable small laboratory near the Garnison Church, which the old medical men well remember. In 1840 Müller presented him with a French essay entitled: "Des Phénomènes électriques des Animaux," by Makenci. This was Du Bois's beginning to his studies about animal electricity.

In 1842 he had progressed so far that he knew the law relating to the muscular current, the nerve current, and the negative oscillation of the muscular current. Yesterday it was fifty years, on a Saturday, that he received his diploma as a doctor. Among other graduates were Brücke, the late Vienna physiologist, and Du Bois's friend, Joseph Meyer. The speaker's investigations caused so much comment that they were questioned when Humboldt mentioned them in Paris. Humboldt climbed the narrow stairs leading to Du Bois's small room in the Karl-Strasse, and there himself tried the various experiments; after which Du Bois went to Paris; remained three months with Flourens and other scientific lights, and so finally achieved a little fame there. Later on he went to England. Magnus mentioned his discoveries in London, after which he was invited and worked in Faraday's private laboratory four weeks.

Professor Hirsch's life has also many interesting points; he was brought up to be a merchant, but as this life did not suit him he studied medicine. He finally graduated and entered the practice of medicine. As he did not like general practice he at once turned to investigations in historical and geographical pathology. His work in these branches was of such interest and importance that in 1864 he was appointed associate professor of historical medicine.

Now comes an anecdote. One day this young professor met his former employer, and anxious to know about this unsuccessful merchant (Professor Hirsch), he inquired what he was doing. "I am a professor at the Berlin University." "Then I am pleased to hear that you are a respectable man," answered his former employer.

Parallel with these celebrations scientific work continues as formerly. Among others, Dr. Nitze, of Berlin, read a paper on "Photography of the Bladder," with illustrations. In his text-book on cystoscopy, he advanced theories relative to the appliance of photographic methods. The practical application was then commenced by his assistant, Dr. R. Kutner. The photograms of the latter did not satisfy the general demand, after which Dr. Nitze took the matter in hand. His demonstrations, a few days ago, in the Berlin Medical Society, were entirely satisfactory, and we have now a decided help in diagnosticating abnormal internal vesical conditions.

In one of the recent meetings of the Medical Society Professor Fürbringer spoke about peanuts as a nutrient containing an enormous amount of albuminoids. They grow in large quantities in Middle Africa, in Madras, and in the southern portions of the United States, where they are used as nourishment. They contain forty-seven per cent. of albumin, nineteen per cent. of fat and carbohydrates, nitrogenized extractives, and other substances. Professor Fürbringer experimented on one hundred and twenty patients—men, women, and children; he prepared a soup from these peanuts which was well assimilated, even dyspeptics seemed to like them very much. About a dozen, mostly women, could not retain this soup and complained of nausea. A soup made from twenty-five to forty-five grammes of peanut gruel contained about sixteen grammes of albuminoids; equal to the nourishment contained in one hundred grammes of meat, two eggs, or one-third of a quart of milk. The ground peanuts were used as flour from which macaroni was baked. The price of this preparation is exceedingly cheap. A plate of soup made in the above manner costs about half a cent. Fürbringer believes that this can be used not only for our numerous hospitals, but for general household nourishment.

In my last letter I reported the opinion of the re-

nowned hygienist, Professor Hüppe, on the late epidemic of cholera. Since that time he has completed his report, and I propose to give some of the more important points contained therein. Hüppe states that disinfection was carried entirely too far. He says that we must have always certain problems to solve in practising disinfection. We do not know how many germs in minimo are necessary for a choleraic infection; but we can, according to our animal experiments, say that, *ceteris paribus*, the danger of infection increases with the number of germs present. We therefore have a duty to destroy as many germs as possible. We can positively destroy the germs so long as they are in the immediate vicinity of the patient, in his dejections, his vomit, and his soiled bed-linen. If we do not properly disinfect at this time, then it is entirely superfluous, for cholera bacilli lose their virulence outside of the body very quickly.

From this stand-point Hüppe proposes disinfection rules which are entirely different from those used in the last epidemic, for he believes that disinfection was then entirely too rigorously carried out. Without proper reason, intercourse and commerce were prohibited.

Hüppe gives the following points regarding human intercourse; every real cholera patient, and also suspicious cases on land or water, should be isolated. This can be accomplished without interfering with travel. *A quarantining of all travellers from infected districts, as it was practised recently, is unnecessary.*

Railroad companies should have the closets so arranged that dejections from patients should be received into antiseptic substances and not allowed to be scattered on the tracks.

The cross-questioning at railroad stations, as it was practised in Berlin last summer, is ridiculous. The baggage of travellers should be opened, and bed-linen and underclothing only should be disinfected. The disinfected wash should be sent after the traveller to his destination. Great care should be required to prohibit human intercourse on board ship. The points here to be considered are isolation of the sick and disinfection of used substances. Hüppe states that great loss and damage were done to certain branches of trade without reason: for instance, in one case rice packed in bags was sprinkled with carbolic water, and was rendered totally unfit for use; and again, rice was disinfected by steam, by which it was swollen to a mush and was rendered unfit for use. The sale of fruit, caviar, and vegetables, although we know that they do not tolerate cholera bacteria in a raw state, was prohibited, yet all such substances must be boiled before they can be used.

NASAL MEDICATION WITH MORPHINE AND COCAINE.

To the Editor of the Medical Record.

Sir: Having noted what Drs. Corning, Woodman, and Satterlee have said in the Medical Record regarding nasal medication, I feel bound to say that, in my opinion, based on my experience, *Corning* is *wrong*, Woodman is right.

There is a danger, distinct and decided, from both morphine and cocaine used per nares. I have had cases of inebriety from each drug, so caused, under my care.

In the Maryland *Medical Journal*, March 29, 1884, a notable case of morphine addiction having such origin was reported; reprint at command, if desired.

In the second part of my paper on Cocainism—Medical Record, January 14, 1893—several cases of inebriety so arising are cited, and I know of another case, a well-known man now *mad* from cocaine, first given him by a New York rhinologist.

Dr. Satterlee is mistaken in saying that if morphine or cocaine be given unknown to the patient, there is no danger of addiction. I know of case after case to the contrary.

One well-attested case is worth a score of theories, and my experience warrants me in saying that *the continued use of morphine or cocaine, be the manner what it may, and known or unknown to the patient, always involves the danger of inebriety.*

J. B. Mattison, M.D.

Brooklyn Avenue, Brooklyn, N. Y.

OBLIQUE ENTERORRHAPHY.

To the Editor of the Medical Record.

Sir: In your issue of February 11, 1893, I notice a few lines from Doctor Morris. In reply would say, I beg a thousand pardons. I beg leave to assure him there was nothing further from my mind than claiming any particular incision, or angle of incision, as originating with me. By turning to page 335, in your issue of September 17, 1892, he will find a monograph read by me before the Brainard Medical Society, in July, 1892. Up to this date I have reason to think that the suture described by me then, originated in this institution. He will notice that I say, "This suture is applicable in pylorectomy, gastro-enterostomy, anastomosis, circular and oblique enterorrhaphy." To the above I might now add "cholecysto-enterostomy," as I have a specimen of the latter now.

The letter which he referred to in the Medical Record, January 28, 1893, was one written by me in answer to questions which I had been called upon to explain repeatedly. Several of these letters were sent to the Editor of the Medical Record at that time. I deem the "Oblique Method," with the suture described by me, September 17, 1892, one of the best, easiest, and safest that I am acquainted with. I have made several circular unions by this method, using but one knot, and have some very nice specimens. Each time I have removed a "V"-shaped portion of the bowel—the base of the "V" on the convex surface, and the apex of the "V" to the mesentery. I deem this good surgery, as it removes the part most likely to become gangrenous. I am aware that this incision, that is, removing this "V" shaped piece in circular enterorrhaphy is not new, nor do I claim it as originating with me, any more than I do the "Oblique." I have not looked the matter up far enough to find to whom credit is due for this idea.

In my recent experiments, in making anastomosis by this method, I have removed a diamond-shaped piece of intestine from the convex surface of each portion of bowel.

The Plate Operation, as originally devised by me, had a straight incision, but has been modified a great number of times, the modifier in most instances, I believe, failing to give any credit to the originator. I was prompted to remove this diamond-shaped piece by the fear that the incised portions coming in contact might unite, as, unlike the plate operation, in this method there is nothing to keep the edges of the incision apart. I do not know that this idea originated with me, nor do I claim it.

Dr. Morris will observe that I attempted to describe a method or suture we are experimenting with here in our spare moments.

I have not attempted to write an exhaustive paper on enterorrhaphy, when I do I shall endeavor to give credit to whom credit is due. The suture described in the Medical Record, September 17, 1892, is all I claim. In brief, I claim a running suture, transfixing the walls of both bowel-ends in such a manner that knots and suture are "out of sight" when completed, buried as in the plate operation.

I am preparing a paper now, giving the details of twenty-five experiments with this suture, with but two deaths, to me a very satisfactory percentage.

My friend Dr. Oviatt, of Oshkosh, has tried this suture experimentally on dogs nineteen times, with but one death, and that was owing to his neglect to secure the catgut knots by a fine silk ligature. This same thing happened to me, and I warned him of the consequence

of such neglect, but he did not believe that his catgut knot would become loose, until he found it so for himself by experiment. Doctor Oviatt informs me that when he has tried twenty-five experiments, he will publish his paper.

Again I will say that I beg Dr. M.'s pardon, and hereafter will call the oblique by this method, "The Connell suture with the Morris twist."

Yours truly,
M. E. Connell, M.D.

Milwaukee County Hospital,
Wauwatosa, Wis., March 11, 1893.

INTERPRETATION OF NATURE.

To the Editor of the Medical Record.

Sir: Professor N. L. Shaler, in his recently published "Interpretation of Nature," speaking of Polydactylism says: "But we are startled to find that when these supernumerary digits are removed by the surgeon's knife, they have the extraordinary power of growing again" (page 82). Can any of your readers inform me if such a fact has ever come within their experience?

G. La Breche-Smith, M.D.

February 24, 1893.

STRYCHNINE IN TYPHOID FEVER.

To the Editor of the Medical Record.

Sir: In the Medical Record for February 18, 1893, Dr. P. Parr Thompson, relating his brilliant results with sulphate of strychnine hypodermically in cases of collapse in *typhoid* fever due neither to perforation nor hemorrhage, asks whether this treatment "has been previously used and recorded." Allow me to notice in this connection that Dr. Manuel Dominguez, in his article on "Typhus," in Hare's "System of Practical Therapeutics," vol. ii., page 327, says: "If profound prostration and collapse supervene, . . . sulphate of strychnine hypodermically is the remedy to be employed. . . . I can highly recommend this method," etc.

Very respectfully yours,
I. Kaufman, M.D.

Brooklyn, N. Y., March 1, 1893.

VACCINATION IN HONOLULU.

To the Editor of the Medical Record.

Sir: With us here in Hawaii, the first desideratum in vaccination is absolute surgical cleanliness of instrument and virus, freedom from all possibility or suspicion of syphilis, leprosy, or any such thing. The next desideratum is activity or viability of virus—virus that will take. The very last consideration is speed of operation.

When I explain that this order of motives and of painstaking is made necessary by the fact that our community is made up of exceedingly heterogeneous elements, and that leprosy and syphilis are not unknown to us as at all times prevalent disorders, do not misunderstand me to say that we are plague-stricken with these diseases.

I merely mean that they are here, and must be taken into the account, even in such a trifling little operation as vaccination. As a wise precaution, therefore, we are pretty generally in the habit of discarding all knives, lancets, patent vaccinators, spring vaccinators, or any labor-saving instrument whatsoever, as chargeable with bringing in an element of uncertainty and danger.

If one will insist on using a steel point in vaccination, a knife, or lancet, the proper course is for him to hold it for a moment after each operation in the flame of an alcohol lamp, for instance. But that takes time, and one does not have the lamp and the alcohol always by him in his travels.

A better way, and one that is so well known that it needs no mention, is to use the clean ivory or quill slips that are so often provided with vaccine virus. One slip is used for each patient, and all danger of infection is thus avoided.

Clean steel pens also serve a good purpose, used in the same way. I would regard it as a piece of criminal carelessness to use the same lancet over and over again in vaccination, without adopting the most efficient precautions.

It is also a taboo thing with us here to use arm-to-arm vaccination. In fact, all human virus in vaccination is interdicted. Only bovine virus is employed. And it seems to me that this is sound doctrine not only for Honolulu, but for New York as well.

How is it possible for a physician, under the ordinary conditions of practice in a public dispensary or clinic, to vouch for the freedom of any man, woman, or child that may present himself for vaccination, from the contagion of leprosy or syphilis? I do not suppose that clinics in New York City are any less crowded to-day than they were fifteen years ago, nor that there has been any notable increase in the purity of morals and blood of its fixed, or floating, population during the period mentioned. But rather the reverse of this is likely to be the truth, if the immense tide of immigration from Europe's unwashed, diseased millions has produced an effect proportionate to its magnitude. It is well known that leprosy and syphilis are among the diseases they bring in with them.

While I am a strong believer in the communicability of leprosy, still I am not an alarmist, and do not think it such an easy matter to transfer successfully the *bacillus leprae* on the point of a lancet, or vaccinating blade, from the arm of a diseased person to that of one to be operated upon. The case is very different, however, with syphilis, yet I prefer not to take the remotest chance of blasting my patient's life with either of these diseases.

I have never met with a case of leprosy which, after careful investigation, seemed to me justly chargeable with vaccination as its cause. I have seen a number of cases in which vaccination was claimed as the cause of existing leprosy, but in every case the claim broke down on investigation and sifting of evidence. Other physicians of good judgment, however, have seen cases which they believed to be chargeable to leprosy. But even if they were mistaken, and I were to believe that leprosy never had been communicated in vaccination, still I would not think it right to take the most infinitesimal risk, while it could be so easily avoided.

I am especially down upon the old spring-vaccinator, which, with all its merits as a labor-saving contrivance, is also equally well fitted for the transferrence of various kinds of contagion-bearing germs, bacilli, microbes, or what not.

I cannot but denounce them, *et id omne genus* as atrocities full of danger to the patient, that should no longer be used by conservative practitioners of the healing art.

In these days, when it is the fashion for certain cranks to agitate and seek to prejudice the public against that most precious safeguard, vaccination, it would seem to be the duty of every wise and conservative physician to take every possible precaution that these enemies of public health shall have no reasonable or fancied ground to stand upon.

I had almost forgotten to say that these remarks are called forth by the short letter from Dr. Albert Pohly, which appeared in the Medical Record of January 7th last, in which he recommends a new vaccinating knife of his own invention, that appears to be an admirable instrument of its kind. These remarks are intended as a stricture not only on this particular instrument, but on all similar devices.

Yours truly,
N. B. Emerson, M.D.

Honolulu, Hawaii, February 3, 1893.

Child Marriages in India.—A petition signed by over fifty woman physicians has been presented to the Viceroy of India, protesting against child marriages and praying for the passage of a law forbidding the consummation of marriage until the wife has attained the full age of fourteen years.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 25, 1893.

	Cases.	Deaths.
Typhus fever	6	2
Typhoid fever	16	8
Scarlet fever	179	16
Cerebro-spinal meningitis	11	15
Measles	109	3
Diphtheria	110	45
Small-pox	11	4
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

Tennyson's "In the Children's Hospital."—We print, by request, that portion of Tennyson's much criticised poem, "In the Children's Hospital," which refers to the hospital physician. The doctor referred to is said to have been the late Dr. Hilton Fagge, one of the most eminent and kindliest of London's physicians:

Our doctor had call'd in another, I never had seen him before,
But he sent a chill to my heart when I saw him come in at the door,
Fresh from the surgery-schools of France and of other lands—
Harsh red hair, big voice, big chest, big merciless hands!
Wonderful cures he had done. O yes, but they said too of him
He was happier using the knife than in trying to save the limb,
And that I can well believe, for he look'd so coarse and so red,
I could think he was one of those who would break their jests on the dead,
And mangle the living dog that had loved him and fawn'd at his knee—
Drench'd with the hellish oorali—that ever such things should be!
Here was a boy—I am sure that some of our children would die
But for the voice of Love, and the smile, and the comforting eye—
Here was a boy in the ward, every bone seem'd out of its place—
Caught in a mill and crush'd—it was all but a hopeless case:
And he handled him gently enough; but his voice and his face were not kind,
And it was but a hopeless case, he had seen it and made up his mind,
And he said to me roughly, "The lad will need little more of your care."
"All the more need," I told him, "to seek the Lord Jesus in prayer;
They are all his children here, and I pray for them all as my own:"
But he turn'd to me, "Ay, good woman, can prayer set a broken bone?"
Then he mutter'd half to himself, but I know that I heard him say
"All very well—but the good Lord Jesus has had his day."
Had? has it come? It has only dawn'd. It will come by and by,
O how could I serve in the wards if the hope of the world were a lie?
How could I bear with the sights and the loathsome smells of disease,
But that He said "Ye do it to me, when ye do it to these?"

The Modern English House-Surgeon.—It will be remembered that, according to Miss Kenealy, the British house-surgeon of to-day is an uncouth, unmannerly fellow, whose haughty and even harsh behavior toward the ward nurses is deserving of the severest censure. We are at a loss to imagine on what *data* this sweeping condemnation was based, for we were of opinion that the fault, if any, was more likely to be in the opposite direction. We will, however, admit its accuracy, just for the sake of bringing in the explanation offered by Sir Spencer Wells of the conduct complained of. The house-surgeon of fifty years ago could afford to affect a condescending familiarity with the nurses who then discharged the duties at present fulfilled by smart, for the most part well educated and refined, maidens, youthful and often prepossessing, whose charms are heightened and whose natural seductiveness is enhanced by a trim and very fetching uniform. As Sir Spencer Wells pointed out, the attitude of the present resident medical officer is really one of self-defence. He fears lest suavity of manners and amiability of address should be construed as indicating matrimonial intentions, and as nurses are usually on the alert to take advantage of ambiguous situations, he poor man, unable to fly, seeks refuge and security in ducal or even princely arrogance. It is, in fact, his way of intimating a *noli me tangere*. Nurses ought to congratulate themselves on conduct which only infers a dread of their charms and a desire to remain in the path of virtue, thus tacitly admitting their supremacy.

The Surgery of the Frontal Sinus.—This is a subject which finds but small place in current text-books on surgery, probably because it has not hitherto been recognized as of frequent occurrence, and because its signs and symptoms are not generally known. At the last meeting of the Laryngological Society, however, quite a number of cases were brought forward of this troublesome and sometimes dangerous affection. Curiously enough patients suffering from inflammatory affection of, or simple accumulation of mucus in, the frontal sinus, usually apply on account of the diplopia, etc., which is caused by the pressure on the thin plate which alone separates the sinus from the orbit. Later, a swelling may form at the inner and upper angle of the orbit, together with obscure tenderness over the region of the sinus. This condition may be determined by the entrance of foreign bodies, such as snuff, into the cavity, by direct injury or by the extension of catarrhal inflammation, but most frequently, perhaps, it results from some disease of the nose causing the obstruction of one nostril and thus leading to blocking of the infundibulum. In most cases the pressure of the accumulation forces a path through into the nose, and then the symptoms subside for the time being, though, of course, if the nasal obstruction be not removed, the accumulation is almost sure to recur. When this natural vent is not established it is for the surgeon to endeavor to restore it, and should this not be practicable it only remains to bore a hole into the sinus through an incision parallel with the superciliary line and evacuate the contents, the surgeon availing himself of the opportunity to re-establish drainage through the nose. The scar remaining is hardly noticeable, and a cure usually results, especially if the concomitant disease, or deformity of the nose be at the same time properly dealt with.—*Hospital Gazette.*

The Admission of Ladies to Edinburgh Medical Societies.—A lady practitioner in Edinburgh has applied for admission into one of the medical societies there. As at the time when the society was founded the law-makers had no thought of a doctor in petticoats, there are no rules against one being admitted, provided she pass the ordeal of the ballot. A special law will probably be rushed through before she can cross the threshold or undergo the ignominy of being blackballed. There seems to be a general feeling against admitting ladies. Let them have a society of their own, says the ungallant *Medical Press.*

Precocious Children and Cranks.—In the course of an article on cranks, Dr. Williams, the Superintendent of Randall's Island Hospital, says that paranoia is usually the result of inherited mental unstability. The paranoic temperament may be foreseen even in the child. Such a child is morbidly sensitive and has great egotism. He then says: "Unfortunately the parents of such a child usually take pride in the egotism that leads to eccentric acts; while the extreme precocity of many of these subjects causes their egotism to be fostered by ill-judged praise. Usually the child of paranoic temperament is the genius of the family and the show pupil at school. Pampered and praised, even though the entire household becomes subordinated to his will, he is not satisfied, believing that he does not receive his dues. With that idea, the germs of paranoia are planted in his mind, and, of course, the brilliant child is the one whose mental training will be forced. The other children may stay at home, but this one must be sent to college and fitted for one of the learned professions. Often he is an 'honor' man at college, and he starts out into the world with every seem-

ing prospect of an eminently prosperous career." Dr. Williams then describes how the young person may break down while still in college, although usually the critical time does not come until he has gone out into the world. Even then a successful career and contact with the world may correct the morbid tendencies. But let reverses come, especially let the vanity be wounded, and the situation is changed. Selfishness and suspicion assert themselves, and the victim easily becomes dangerous. He is likely to devote his attention to some reform for revolutionizing society or the government. He is a man with a mission. He may be a fanatic, a socialist, or an anarchist, depending largely upon his native temperament. Spiritualism, faith cure, Christian science, theosophy, and any new fad are his meat and drink. The article concludes by giving advice to parents and to all engaged in directing the minds of children. Whenever there comes under your care one of those eccentric, brilliant, precocious children whom you are prone to regard as a budding genius, learn to believe that you have probably to do with incipient paranoia instead, and govern yourself accordingly. By restraining the energies and checking the eccentricities of such a child, you may do something toward moulding an aberrant mind back toward normality; by stimulating the energies and fostering the germs of "genius" you may help to prepare a victim for an asylum or a prison.—*The National Medical Review.*

French Sanitary Conditions Unsatisfactory.—If the sanitary condition of Paris leaves much to be desired, that of many provincial towns is incomparably worse, and in some of them the deaths from preventable diseases are appallingly numerous. The last statistical return, that for 1888, is worth examining, bearing in mind that that year had, with one exception, the lowest mortality in the last quarter of a century. The general death-rate in 1888 in the twenty-eight largest towns in England was 19.12, the highest being Manchester with 26.1, while in the twenty-nine largest towns in France the death-rate was 25.4; Marseilles had a death-rate of nearly 29, Havre of 35.5, Montpelier of 33, Brest of 32, Dieppe of 32, and Rheims of 31. In the smaller towns still higher figures prevailed. Ivry, near Paris, had a death-rate of 43; Lambezelle, a town of 16,000 inhabitants, the same; so had Morlaix; while Douarnenez, also in the Finisterre, with a population of 11,000, actually had a mortality of 53 per 1,000. Gentilly, in the Department of the Seine, had a death-rate of more than 50, though some part of this was probably due to the town containing the Bicêtre. As to the two diseases (typhoid fever and diarrhœa) as a good index of the sanitary condition of a community, they were nearly everywhere prevalent and in some towns they were epidemic. In English towns, in every 10,000 of the population, two persons died of fever in 1888 and six of diarrhœa. The corresponding rates in the twenty-nine largest provincial towns of France were 6 and 23, respectively; in Havre they stood at 26 and 30; in Lorient, 28 and 4; in Rouen, 8 and 74; in Cherbourg, 24 and 19, and in Brest, 11 and 20. In nearly all the towns there was more or less fever, and in many the mortality was so high that a severe epidemic was evidently raging. Many watering-places, especially those of Brittany, suffer in this way year after year, and visitors in search of health not seldom find infection.—*The Scottish Review.*

A Wise Judge and Foolish Doctors.—An interesting case was brought up in an Austrian court recently *in re* Drs. Jantsch and Popper. These gentlemen had been called to the bedside of a child by the father; both appear to have agreed that the case was one of measles. Popper appears from the evidence adduced in court to have been first in charge, Jantsch a little later; but Jantsch, considering himself master of the position, wrote a prescription and gave directions, while Popper remonstrated against the conduct as unprofessional, which led to a scene at the bedside and strong language on both sides. The judge, being rather perplexed how either of them should conduct themselves, proposed that they might apologize to each other and behave as gentlemen in future.

Alum Oil.—This is a new drug of an astringent, antiseptic nature, and is described as a naphtho-sulphate, containing five per cent. aluminium and fifteen of sulphur, light reddish powder, non-hydroscopic, easily dissolved in cold water, but the solution is cloudy in warm water. After a short time in air the powder becomes dark from its reducing power. It is acid, like all the aluminates, in reaction; it deposits albumin, which is redissolved by an excess of the latter, more particularly the gelatine series. This property is held to be of service in deep purulent discharges. Its antiseptic properties as tested seem favorable. A one per cent. solution killed the spores of anthrax, pyocyaneus prodigiosus, etc., within twenty-four hours, which classes it equal to sublimate in its germicidal power. A solution of 0.1 per cent. retards the growth of anthrax, cholera, pyocyaneus prodigiosus, staphylococcus germs in cultures. Small doses, however, can be repeated for any length of time without any adverse symptoms. It has been used with beneficial effects in surgery, in discharging serous surfaces, chronic purulent abscesses, and stubborn fistula. Endometritis, gonorrhœa, colpitis, etc., are rapidly benefited by its application. In dermatology there seems to be no end of cases where the improvement was rapid and efficacious.—*Medical Press.*

A Great Remedy.—The London *Telegraph* tells of an amusing scene which was witnessed one day on one of the Channel boats between Calais and Dover. The sea was rather rough. A young woman, pretty and nicely dressed, appeared to be suddenly taken very ill with seasickness. She groaned and screamed in apparent agony for some little time. At length a gentleman, who appeared to be a stranger to her, approached her, and asked whether she would like to take a lozenge, which he guaranteed would ease her of her pain. He had often tried it, he said, on people, and always with the most marvellous results. The young lady demurred a little at first, but finally accepted the offer. Never was cure so instantaneous. Hardly had she swallowed the lozenge when the fair patient was sitting up all smiles and ordering ham sandwiches and bottled ale of the steward. Some passengers were so struck with the incident that they inquired what was the remedy that had such a wonderful result, and the gentleman, who, as he said, was the agent for the sale of the lozenges, disposed of a considerable number of boxes of them at 10 francs a piece. What was the surprise of the purchasers when they saw the young lady and her preserver go off arm in arm when the vessel reached Dover. The boxes were boxes of common jujubes.

A Doctor's Thoughtful Bequest.—Dr. Cumming, who recently died in Edinburgh, was a man with a kindly heart, and one whose thoughtful consideration for others was evident even in small matters. He bequeathed the interest on a sum of $3,000 to be expended in providing tobacco for the male and snuff for the female inmates of the Royal Infirmary, any balance left over to be devoted to the purchase of tea and sugar.

Worse and Worse—Mr. Hutchinson very justly disapproves of the practice of naming a disease after the physician who first described it, but he offers no improvement when he suggests that it be named after the first person who is so unfortunate as to suffer from it.

Official or Officinal.—Dr. A. H. Dobson defines the distinction between these two terms, in a communication to *The Lancet*, as follows: The terms "official" and "officinal" are so frequently used as synonymous by authors of works on materia medica and kindred subjects that it may be well to point out that there is a wide difference between the words. "Official" (*officium*, an office) means issued or sanctioned by authority; "officinal" (*officina*, a shop) means kept in a shop. Blue pill is official; liver pills are officinal.

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Original Articles.

RESECTION OF THE INTESTINE IN GANGRENOUS HERNIA.[1]

BY CARL BECK, M.D.,

INSTRUCTOR IN CLINICAL SURGERY AT THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL; SURGEON TO ST. MARK'S HOSPITAL AND TO THE GERMAN POLIKLINIK.

MR. PRESIDENT AND GENTLEMEN: Since the time that Czerny undertook, with indisputable success, the first resection of the intestine for gangrenous hernia in a woman, forty-three years of age, opinions have differed, and the question is still pending whether anus præternaturalis or primary resection is to be preferred.

The very successful results of Czerny, as well as those of Kocher, afterward of Schede, of Nicoladoni, of König, of Rydygier, and others (the pre-antiseptic case of Ramdohr is not wholly indisputable) were to be valued so much the more as they had already been obtained in the year 1878, consequently at a time when antisepsis was still in its infancy, when the "all-bacteria-killing carbolic spray was considered sufficient to cover, or at least to excuse, the sins, committed or omitted against asepsis.

After such splendid achievements and the subsequent eminent development of the antiseptic method, one would have expected that the operation for anus præternaturalis had been thrust off as surgical rubbish and become obsolete. Up to this time, however, that hope has by no means been fulfilled. No less a man than Hahn even, with regret, remarked, only a few years ago,[2] that on account of his own unfavorable results and corresponding reports of other authors, he was compelled to give up the primary resection of the intestine with ensuing enterorrhaphy and to return to the formation of an anus præternaturalis, the very ancient method which was already used by Praxagoras.[3]

These unfortunate experiences stand in great contrast with the grand results of the previously mentioned surgeons. It reads like a miracle that Kocher, since using the strictest antisepsis, has recorded only two cases of death out of thirteen resections of the intestine for gangrenous hernia.

While I do not deem myself entitled to compare my cases with those of the leaders of our present surgical technique, I have no doubt, gentlemen, that, from the stand-point represented by Hahn, they may prove of interest to you.

First of all permit me to present to you the history of a case of double resection of the intestine after gangrenous hernia, which is entirely cured and on hand to-night.

Mrs. L——, a widow, fifty-seven years of age, had been suffering from an umbilical hernia for about thirty years. Dr. George Stiebeling, who had been the family physician for that length of time, was able to reduce the hernia several times during the last twenty years, yet it was but improperly controlled by a truss, as the rather careless patient frequently neglected the application.

For the last few years several inflammatory processes had taken place, which were subsequently followed by formation of adhesions, so that the rupture, which had finally developed to the enormous size of an adult's head, could no longer be kept back in the abdominal cavity.

At the end of last year, after a forcible but unsuccessful attempt to defecate, vehement pain, nausea, and repeated vomiting showed an incarceration, which was, however, not recognized as such by the patient owing to the number of preceding similar attacks, so that at first the common omnipotent infusion of chamomile was tried in all its different styles.

When Dr. Stiebeling was called in the next day, it was impossible to make even a partial reduction.

When I first saw the patient I found a normal and strongly built woman, of rather small stature, with fully developed panniculus adiposus. Her weight was 170 pounds. In the region of the umbilicus there was seen a globular tumor, larger than the size of a human head, partially adherent to the external skin, which was very much reddened at some points. Feculent vomiting had set in two hours before. The temperature was 102.3° F. (*in ore*), the extremely weak pulse 135.

She was immediately transferred to St. Mark's Hospital, where, late on Christmas eve, I performed herniotomy. After the stomach was washed out, the skin was thoroughly brushed with soap and warm water, then washed with ether and a one per cent. solution of corrosive sublimate and moistened with iodoform-ether. We then proceeded with the anæsthesia, and on account of the weak pulse ether was administered.

A cross incision over the largest breadth of the tumor was made, and immediately distended. A highly hyperæmic condition became apparent, as the skin and sac in some places were as thin as card-board. About two tablespoonfuls of a brownish-colored, ill-smelling fluid ran out. There was no other possible way of gaining access to the side of the incarceration, which was covered by a mass of adherent intestine, than by breaking the adhesions up. After long and laborious efforts I succeeded in applying a row of iodoform-silk ligatures about the tumor, which consisted of about a yard of intestine. Behind these I now commenced to look for the ring. The surrounding skin had been previously anointed with a three per cent. salicylic salve as far as it was likely to come in contact with the intestine.

I also wish to state here that the pulse had entirely stopped, a feature which kept me in constant fear that I was performing a "needless" operation.

By this time it had become an easy matter to reach the hernial ring and to take a view of the incarcerated part of the intestine. It had a very darkish-red color, and one spot, of about the size of a five-cent piece exhibited a bluish-black tint. I now shut off the abdominal cavity with iodoform-gauze, in order to prevent any additional infection and to keep out the sublimate solution which was to be applied to the extra-abdominal parts of the intestine.

I may add here that I use without fear a one-half pro mille solution for disinfecting the intestine, with the necessary precaution, of course, to irrigate right after with Thiersch's solution, for I am of the opinion "that if disinfection be necessary it must be done thoroughly."

In a very considerable number of laparotomies and herniotomies, in which, to the terror of many colleagues I have employed corrosive sublimate solution, I have never perceived any symptoms that could be traced to the use of mercury.

In handling the brittle intestine a rupture occurred at the above-mentioned tinged spot. The ill-smelling contents were fortunately caught up in time, and a small disinfected receptacle was placed under the opening.

[1] Part read before the New York Academy of Medicine, July 6, 1892.

[2] Eugen Hahn: Berliner klinische Wochenschrift, 1888, No. 26.

[3] Cœlius Aurelianus, lib. iii., page 17.

Of the two operations possible, enterorrhaphy, or anus præternaturalis, I decided upon the first. I once more washed the region of the operation with sublimate, and then cut out a large enough piece of intestine, until I believed that I had healthy tissue before me, when I applied a Czerny's double suture, using the finest iodoform-silk. In the meantime Rydygier's compressor had been applied on both sides. Now followed another irrigation with sublimate and boro-salicylic solution. The reposition of the intestine into the abdominal cavity was now successfully accomplished without any difficulty worth mentioning. The place of union was sewn by two fine catgut sutures to the hernial ring, a measure which would permit the finding of this spot in case the sutures became separated. Even at this period the establishment of an anus præternaturalis is possible.

The hernial sac presented a large collapsed cavity, resembling in its appearance a post-partum uterus. I extirpated the entire sac, besides the larger part of the abundant external skin. In both corners of the wound, reaching to the hernial ring, I put several iodoform-wicks, which by far surpass all means of drainage known to me, including also the strips of iodoform-gauze.

Next followed the closing of the wound by sutures and a tight bandage. Over this an ice-bag was applied.

The operation lasted two hours.

The patient was much collapsed, with clammy body, pulse hardly perceptible. About twenty injections, consisting partly of tinctura strophanthi, partly of camphor and cognac, had been administered.

The pulse had somewhat improved the next morning, and descended to 108, after several stimulants had been given hypodermically during the night. Vomiting took place only five times; wind was also passed. Hypodermics of morphia given every few hours controlled the peristaltic movements; furthermore, hot water in teaspoonful doses, and every five hours an enema of wine with an addition of extract of beef was given. The temperature oscillated between 101° and 102° F., the pulse averaged 100, and was better in quality the following day.

On the third day, when the bandage was changed, the edges of the wound appeared firmly united, the surroundings reddened. The iodoform-wicks were covered with a brownish exudation, and on removing them some badly smelling secretion followed.

The wound was irrigated with sublimate and the cavity packed with a large quantity of iodoform-wicks.

The following day intestinal contents were found in the wound. Necrotic particles were removed. Ever since then the temperature has remained normal, yet the pulse stayed weak and could not be brought below 90, in spite of the repeated use of digitalis. One week after the operation about two-thirds of the large wound was healed by first intention, the other third was taken up by a well-established anus præternaturalis as large as a silver dollar. No more fæces were passed per vias naturales. The whole nutrition, now more substantial, was carried on per os.

The further progress became somewhat clouded through bronchial difficulties, and the steady fear of hypostatic pneumonia. A painful eczema formed and spread far about the wound: it was treated with unguentum zinci salicylici, but healed very imperfectly. A dressing of salicylic gauze, and over this a thick layer of "Neustrelitzer Moos" was used—which latter has originally been recommended by Fagain on account of its immense absorbing qualities. Two months after the operation the patient was discharged from the hospital, notwithstanding her urgent request for a plastic operation. Her weak pulse caused me perpetual fear that she would hardly endure such a radical operation as the plastic closure of the anus præternaturalis actually is, and so I consoled her with the promise to operate later on, after she had picked up sufficiently at home. Her strength, however, failed to come back after a four weeks' stay at home, so that at last I determined to yield to the pressure of the unfortunate woman, whose gratefulness for the preservation of her life, by the way, was very moderate.

On the 7th of April, after all the necessary preparations, I made an elliptic incision around the opening and loosened the intestine from the surroundings, which had acquired an almost cartilaginous hardness. I then, with the sharp curette, removed a few granulations near the intestinal mucous membrane and closed the lumen by Rydygier's compressor, which I prefer to all clamps, not excluding the large Péan's forceps. They consist of two small whalebones covered with disinfected rubber tubes. When applied, the ends are joined together by rubber bands. Before all forceps they have the advantage, as Rydygier rightly observes, that their parallel branches equally compress the intestine, while the former exercise more pressure nearer the joint. Accordingly, the pressure on one side might be so strong as to lead to gangrene of the concerned section, while the pressure on the opposite side might be just sufficient to stop the outflow of intestinal contents. The parallel operating compressors, on the other hand, hold the intestinal walls evenly together and sustain them in their position, thereby facilitating the accurate application of sutures subsequently. They also keep their position, whereas very few assistants are able to keep their fingers together during the whole length of the operation; and furthermore, the clamps occupy less space than the fingers.

In answer to a distinguished surgeon of this city, who in his excellent text-book declares Rydygier's clamp to be unhandy, because the surgeon would not think of taking them along for every herniotomy, I beg to state that I fail to find any difficulty in having this splendid instrument along with me for any abdominal operation.

The intestines were now drawn forward and disinfected, and the abdomen closed behind them. From the ascending end about two inches, and from the descending one about one and one-half inch, were cut off with scissors in an oblique direction. The mesentery was simply folded, but no part resected. Precise co-aptation was aimed at. About forty iodoform-silk sutures (according to Czerny) were employed, making a furrier stitch on the inner side.

Once more the intestines were disinfected and then replaced. Two catgut stitches were used for the previously explained object. The inner opening was sewn with very stout iodoform-silk. There was a considerable amount of tension. A "second tier" of suture was now applied, and finally the external wound was trimmed with knife and scissors, and co-aptated. Three iodoform-wicks were laid into the two corners of the wound as at the previous operation.

At the first skin-cut the patient had become pulseless and respiration had ceased. I had to interrupt the operation for five minutes until the pulse had become perceptible again, after administering stimulants. During the rest of the time (about one and a half hour) no anæsthetic was used, and the patient bore the operation comparatively easily.

The case progressed in an ideal manner. The temperature never rose above 99½°. The pulse remained 90, weak but regular. The mouth was rinsed out occasionally with water, but the entire nutrition was carried on exclusively by wine and extract-of-beef enemata for the first three days, after that hot water by the teaspoonful was given per os.

On the third day the iodoform-wicks, slightly saturated with serous secretions, were removed. On the eighth day a second change of the dressings was made, when the wound had healed per primam. For the first time, on the eighth day peptonized milk, later on bouillon and beef-tea were administered per os, whereupon the patient recovered very speedily, so that I had the gratification of discharging her cured from the hospital at the end of three weeks.

I still remember an episode which occurred the seventeenth day after the operation, and caused me no slight scare. The nurse had just left the ward for a moment

when the patient asked a convalescent to pass a glass of drinking-water half mixed with wine over to her. The ignorant person seized, by an error which could not be explained, a bottle of sublimate (1 to 1,000) which was standing in the corner and reached the dangerous drink over. The error was not immediately noticed, owing to the addition of wine, and the entire poisonous mixture was swallowed. Luckily the patient at once began to vomit vehemently, and recovered from this incident without any further trouble. Now, one year after her discharge, the patient enjoys the best of health. She has taken every kind of food without suffering at all from indigestion, and the movements of the bowels are normal. A considerable improvement of the circulation manifested itself by a stronger and slower pulse. So under the worst imaginable circumstances, resection was twice performed with final success.

Now, the same condition occurred after the first operation as would have followed the formation of an anus præternaturalis. The patient did not suffer any injury through this, however. Had the primary suture turned out to be successful, it would have been a great advantage for the patient, considering the risk of a second dangerous operation.

Permit me, in order to illustrate my views to be set forth below, to mention the following cases operated upon by me during the last two years, since I have adopted the strictest and most energetic antiseptic precautions for operations on the intestine. There are four cases, one of which was cured a year ago by resection of the intestine, a not very complicated case; two more operations for artificial anus with fatal results; and one case of herniotomy, also with fatal result; in the latter case gangrene had set in previously, as was shown by the autopsy.

Case II. *Resection of Intestine—Cure.*—John D——, a well-nourished man, forty-five years of age, a coal-carrier by trade, afflicted with a small inguinal hernia on the right side for about four years, stumbled on the stairs and fell. A few hours after, very vehement pains and vomiting set in. The house physician was immediately called in and prescribed an ice-bag and opium, whereupon "to my sorrow" a brief improvement took place. Next day, May 17, 1891, herniotomy was performed. The hernial sac gave forth a foul odor, no abdominal fluid was present. Upon opening the very thin hernial sac, which was intensely red, the intestine protruded. The incarcerated site showed a bluish-black color and felt very soft and brittle. A loop of the intestine five inches long and undoubtedly gangrenous was resected, and twenty-seven (Czerny's) sutures of iodoform-silk were inserted. Bichloride solution was used for irrigation. The mesentery was not sutured. The operation consumed one hour and a half. No incident of importance occurred. Healing by first intention took place everywhere, except in places where the iodoform-wicks had been placed. The patient was discharged after four weeks and has been healthy ever since; he wore a truss till the beginning of this year.

Case III. *Anus Præternaturalis — Death.* — Mrs. T——, aged seventy-six, was afflicted for the last twenty years with a small femoral hernia on the left side, which disturbed her so little that she wore no truss. She overexerted herself once while moving, and on the next day violent fainting spells, pains, and vomiting set in. The patient refused to be examined by her house physician, so that on the following day, when, in spite of the administration of narcotics, ileus had set in, the diagnosis became clear without a local inspection. On May 3d, two days after incarceration had resulted, herniotomy was performed. The patient showed serious signs of collapse, so that she could not be thoroughly anæsthetized. The hernia was of the size of a goose-egg and was badly inflamed. From the hernial sac a tablespoonful of a turbid, thin, ill smelling serum poured forth. The dark-colored incarcerated intestinal loop became lacerated while being drawn forward, but only after the compressor had been applied. The ring of incarceration was very narrow. After cutting the ring the intestines were drawn out further and irrigated with Thiersch's solution. A piece eight inches long was resected and fastened in the wound by a few sutures of sublimate-silk. The operation lasted one hour and a half. On the next day the improvement was considerable; excrements were discharged from the wound. The pulse was 88; the temperature 101° F. The day after renewed vomiting set in. The temperature was subnormal and indicated collapse. Death took place next day. No autopsy was permitted.

Case IV. *Anus Præternaturalis — Death.* — Mrs. S——, aged forty-three, had been suffering for two years from right femoral hernia. She had worn a truss until a few days ago. While lifting a heavy burden the hernia came out, and vomiting and diarrhœa soon appeared. The latter ceased on the next day. Since that time no more defecation had taken place. The family physician made several attempts at reposition, but without success. The following day, December 20, 1890, herniotomy was performed. The swelling was about as large as a goose-egg, situated under Poupart's ligament, and the skin was diffusely reddened. On incision a few tablespoonfuls of odorless bloody serous abdominal fluid flowed out. The subcutaneous cellular tissue was œdematous and emphysematous. The intestine was gangrenous to the extent of about six inches. After careful irrigation with boro-salicylic solution an anus præternaturalis was formed. Time consumed, one hour and a half. Death twenty-eight hours after. During the autopsy the prævesical as well as the cellular tissue surrounding the hernial sac were found to be infiltrated with foul-smelling stercoral fluid. The peritoneum of the small intestine looked deeply injected, and was covered with sticky purulent exudation. No fæces were found in the peritoneal cavity.

Case V. *Reduction—Death.*—Philip S——, twenty-four years of age, a watchmaker. He said that he had noticed a right scrotal hernia for the last few months, which had never caused him any trouble. Incarceration resulted from exercise at a baseball game. In order to stop vomiting and obstipation, he foolishly relied upon household remedies for fully three days—of course with the worst results. Not till now—but too late—a physician was summoned, who at once attempted taxis. The fourth day after incarceration had taken place, herniotomy was performed.

After the hernial tumor of the size of a fist was laid bare, no discoloration of the intestine was observed anywhere. No foul odor nor trace of abdominal fluid was present. Between the intestines and the hernial sac there were a few adhesions, which could easily be loosened. After the incision of the ring the intestine was washed with boro-salicylic lotion and easily returned. The wound was closed with sublimate-silk, and strips of iodoform-gauze were put into both corners of the wound.

The time of operation was thirty minutes. On the next day his condition was comfortable. The thermometer registered 101° F. The pulse was 110. Notwithstanding the administration of opium, diarrhœa, and later on vomiting, set in. He died in collapse. The autopsy showed a perforation as large as a cent in the section of the intestine which had been incarcerated. Twelve inches of the gut were gangrenous.

Where events speak, theories have to be silent, and while the saying "*Post hoc, ergo propter hoc*" is not entirely free from objection, it contains a good deal of wisdom which we might appropriately style "common sense." Everybody will admit, that if I had attempted to perform resection of the intestine on the two cases who died after the establishment of an artificial anus, they could not have fared any worse either. But who can prove to me that both cases would not be still alive, had I resected the intestine? On the other hand, supposing I had established an anus præternaturalis in the two cases which recovered after resection, might not the question be raised that the cure could solely be ascribed to the circumstance that I had adopted the unpleasant but sure

method of operation for anus præternaturalis? Furthermore, I might perhaps have been able to effect a cure in the case where I performed reposition of the intestine, erroneously presuming that there was enough vitality left, had I adopted the method which at that time—two years ago—I was not familiar with, viz., left the intestine, enveloped in the proper coverings for observation outside of the abdominal cavity, in order to repose or resect as occasion would demand.

I note from the annual report (1889) of one of the most distinguished surgical clinics that among five cases of hernia implicated with gangrene, resection of the intestine was twice performed, in two cases an anus præternaturalis was established, and in the fifth case the attempts at reduction were unsuccessful. All those cases died. How are these sad results to be brought in accord with the statistics of Kocher, for instance, who claims a death-rate of only fifteen per cent. after resection of the intestine caused by gangrenous hernia?

At the General Congress of Surgeons held last year in Berlin, Professor Helfrich, of Greifswalde, said that the methods of operation, when loops of the intestine are apparently gangrenous, vary very much, as a good many operators prefer on principle formation of anus præternaturalis, while others resect the intestine immediately.[1]

This question cannot be satisfactorily settled before the profession possess much more extended statistics, which deal particularly with the results obtained in operations by the same surgeons, analogous cases which have been operated upon under similar conditions, partly by resection and partly by the establishment of an anus præternaturalis. Such, however, is still a "pious wish." In the year 1878 I tried to do my share to settle the dispute by experiments on animals. *I produced artificial gangrene by preventing venous reflex in sixty-nine cats, by constricting an intestinal loop with a thick disinfected thread of silk.* Two days later, on an average, I resected the intestinal coil, which had usually become bluish-black, and performed enterorrhaphy, and in the other half I established an anus præternaturalis. Among the first half the death-rate was thirty-three per cent., in the second fifty-six per cent. Several cases of death after the formation of anus præternaturalis, which took place after a lapse of some time, were due to inanition, because accidentally I had selected the upper part of the jejunum for operation. Although the results obtained in my experiments cannot directly be applied to the human species, yet they teach many valuable lessons, the learning of which would be inadmissible at the expense of human life. At all events, my experiments answer the question in their relation to each other, and as they were carried out amid strictly similar conditions the smaller mortality of resection of the intestine should speak against the old maxim that "formation of anus præternaturalis is the indeed sorrowful, but the sole and comparatively less perilous, expedient." Nor should we forget that the principles which to-day universally govern the treatment of shot-wounds were gained principally by experiments on the lower animals, and while yet a few years ago the consulting surgeon was unable to do more than the family physician with his application of ice-bag and opium, to-day he does not hesitate a moment to undertake the frequently life-saving laparotomy. A short time ago attention was called in this Society to the excellent experiments on animals by Nicholas Senn, of Milwaukee, by which he endeavored to settle several vital questions concerning especially the form of the resection of the intestine and the causes of death after the operation, particularly with regard to gangrene of the intestine from internal incarceration. On this occasion Senn was declared to have been the first man who by experiments on animals had brought critical problems nearer to their decision.

I willingly admit that to no American surgeon do we owe more light on the intestinal surgery than to Senn, yet I must claim for my own self the first experiments in this direction. Specially have I to claim for myself the idea of having first artificially produced intestinal gangrene. These facts have been acknowledged by Professor Rydygier,[1] of Krakau, in a paper describing his own similar experiments, and further by König[2] and Sonnenburg.[3] My experiments were made in the year 1878, and are published in the twenty-fifth volume of Langenbeck's "Archives for Clinical Surgery;" while Dr. Senn's publication[4] appeared in the year 1888. Observations have convinced me that primary resection of gangrenous hernia is not only the simpler, but also the less dangerous, method. I exceedingly regret that, influenced by renowned surgeons, I was several times induced to form an anus præternaturalis on account of reported failures of resection.

However, it becomes more evident to me every day that these failures are less dependent on the method than on its imperfect execution, on questionable antisepsis, on false technique. Does not Kocher furnish a striking illustration if he himself confesses to 9 deaths among 12 resections, during the epoch of the carbolic acid spray, while now, by greater practice and bichloride antisepsis, he records 2 deaths among 13 cases? Among these latter is a case where a piece of intestine a yard in length was removed in three sections.[5]

Let us now suppose that all these recovered patients had not died after the formation of anus præternaturalis, in what a wretched condition would they be afterward!

The impossibility of perfect closure at all times, the danger of formation of an abscess, the ever-worrying eczema, and last, but not least, the constant dread of a dangerous secondary operation, are sufficient reasons why patients would frequently prefer death to existence.

After successful resection of the intestine, however, the patient is practically well in from three to five days. The treatment with Dupuytren's intestinal forceps is by no means devoid of danger, and, according to modern surgery, is no longer a meritorious method. Neither can I understand why the establishment of an anus præternaturalis should reduce the danger of infection to a minimum. If disinfection has not been thorough, sepsis sets in any way, and by using proper antiseptic precautions reduction is just as safe. Moreover, if all cases of death after anus præternaturalis were published, the statistics, in my opinion, would certainly not lean in favor of this operation.

In reviewing, let me draw the following conclusions:

1. The intestine suspected of gangrene is to be drawn outside of the abdominal wound, properly enveloped in sterilized gauze, in order that the surgeon may be able after a few days either to return or to resect the same. The same proceeding is to be adopted if peritonitis has already set in.

2. If positive gangrene, which manifests itself by bluish-black colored spots, and in most cases by its odor, has set in, an extensive resection of the intestine is to be performed; this is not contraindicated even by a previously established perforation, providing that the adjacent peritoneum has a healthy appearance.

3. The chief requirement of success rests in absolute asepsis and antisepsis. This is attained: (*a*) by radical disinfection of the surroundings; (*b*) by carefully preventing the discharge of intestinal contents into the abdominal cavity.

4. A resection can only take place in healthy tissue in order to obtain primary union. It can happen very easily, however, that intestine is united on the walls of which the circulation has been already disturbed: the careless observation of this incident seems to me to be the most frequent cause of separation of the sutures. The cut should be oblique, so that broad surfaces come in contact.

[1] See Helfrich, Langenbeck's Archiv. für klinische Chirurgie, Bd. 41, p. 337.

[1] Rydygier: Berliner klinische Wochenschrift, Jahrgang 1881, p. 621.
[2] König: Lehrbuch der speziellen Chirurgie für Aerzte und Studirende, Bd. 2, pp. 348, 349. Berlin, 1885.
[3] Sonnenburg: Centralblatt für Chirurgie, Jahrgang 1880, p. 317.
[4] Nicholas Senn: An Experimental Contribution to Intestinal Surgery. St. Louis, 1888.
[5] Kocher: Correspondenzblatt der Schweizer Aerzte, Jahrgang 1889.

A broader surface should be left on the concave side of the intestine than on the convex side.

5. The supply of blood from the mesentery must be very carefully sustained, and therefore wedge-shaped excision is to be avoided.

6. In order to prevent any discharge of excrements during the operation, Rydygier's compressors are used.

7. For enterorrhaphy, the single Lembert suture is not reliable, therefore the Czerny suture is to be preferred. I recommend continuous suture for the inner row in the interest of speed, which is of the greatest importance.

I would not use Senn's plates, especially where there is a disposition to gangrene, for they, in my opinion, rather favor it through the compression.

The suture, as described by Czerny, is executed as follows: A very fine needle is introduced, 2 to 3 mm. from the edge of the wound, into the serous membrane, and brought out close to the mucous membrane; it is reintroduced close before the mucous membrane on the other side, and comes out on the serous side 2 or 3 mm. from the edge. After tying this, the edges of the mucous membrane lie close to each other on the inside of the intestine, and the freshened surfaces come into contact, while the peritoneum is in opposition to the depth of 2 to 3 mm. This first row of sutures is placed at intervals of 3 to 4 mm.

The threads are cut very short, and immediately over them, partly touching the first row, a second tier is applied in continuous suture, which (like Lembert's sutures) bring the serous surfaces into further contact. It is sufficient to insert the stitches of the second row at intervals of ½ ctm.

It is of the greatest importance that serous membrane fits exactly on serous membrane.

Senn, deeming a good cover very essential, has proposed to pack the entire line of sutures into a part of the mesentery. It is an excellent idea, and can certainly be realized in many cases; in general, however, the ordinary suture should be sufficient.

8. As sewing material, iodoform-silk is preferred to catgut, which is too yielding.

9. The abdominal cavity must be closed with antiseptic gauze during the operation, in order to make the operation an extra-abdominal one.

10. The hernial ring must be dilated as much as possible.

11. The disinfection of the intestine resting outside the abdomen is performed with a one-twentieth per cent. bichloride solution succeeded by irrigation with sterilized water.

12. The place of the intestinal suture is prophylactically fastened by two catgut sutures to the abdominal ring, so as to enable the operator to find it in case symptoms of separation should appear, and the formation of an anus præternaturalis can be no longer avoided. This does not disturb the healing process, which cannot be said of the knot as proposed by Jobert. Into the corners of the wound iodoform-wicks are placed, which can be removed after three days.

13. On top of the dressing, consisting of iodoform-gauze and rubber-plaster, an ice-bag is applied, which is very efficient not alone for its usual qualities, but also because it acts like a shot-bag.

14. Nourishment is to be administered in the form of beef-tea and wine enemata, exclusively. The first two days the mouth is rinsed sparingly; the following five days hot water in teaspoonful doses is given per os.

In favorable cases, which by the way are recognized the next day by the satisfactory expression of the face, the feeling of thirst is not at all considerable. The peristaltic movement of the bowels is retarded by hypodermic injections of morphia.

15. The technique of resection of the intestine is extremely difficult, and not in the least comparable with common laparotomy. No surgeon should perform the same before he has sufficiently practised on animals. An operator may be able to resect the ankle-joint in a first-rate manner, and still may perform a resection of the intestine very poorly. In such a case certainly only poor results can be looked for, which his imperfect practice readily attributes to the method. Experiments with the method can so readily be gained by practising on lower animals, that one thousand cats' lives sacrificed are not too much to save a single human life imperilled by imperfect surgery.

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CASE AND SPECIMENS ILLUSTRATING THE FALLIBILITY OF PHYSICAL SIGNS.[1]

By GEORGE L. PEABODY, M.D.,

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PATIENT was thirty four years of age, unmarried; a clerk by occupation. A year and a half ago he was treated in the New York Hospital for pleurisy. Since then he has taken cold very easily. No other history of illness. He uses alcohol very freely. For two months previous to his admission to hospital, in December, 1892, he had been growing short of breath, and had suffered almost constantly from cough. Expectoration had been scanty, yellow in color, and on two or three occasions streaked with blood. He thinks the blood came from his nose. He has grown steadily weaker. He vomits at times. His appetite is very poor. Bowels are regular. Has had no chills, no sweats, and, he thinks, no fever. His chief complaint relates to his dyspnœa. On admission his temperature was 99° F.; his respiration, 28; his pulse, 124. Over the left chest, in front, there is flatness everywhere on percussion; breathing is amphoric above, and voice is exaggerated. Heart is not displaced. Sounds are somewhat muffled. Heart's action is regular, and of good force. Behind, over left chest, percussion note is flat from apex to base. Breathing is amphoric as in front, and from apex to angle of scapula, below which level it is entirely lost. Voice, from apex to angle of scapula, has the quality of egophony, below which point it completely disappears. Vocal fremitus is everywhere absent. Other physical signs were unimportant. He was not anæmic, and was in good general condition. There was no œdema. His temperature remained almost constantly between 100° and 103° F., occasionally passing these two limits, but rarely. He received nourishing diet and tonic doses of strychnine.

Eleven days after admission he suddenly spat up a small quantity of blood and immediately died, in the early morning.

It still seems to me that the inference which I drew from these physical signs was justified by the usual interpretation which we give to such signs in connection with such a history. My belief was that I had to deal with a pleuritic effusion which extended from the angle of the scapula to the bottom of the chest, and that the dulness above this level, which was manifest both behind and in front, was due to old changes in the pleura, of which his previous symptoms (the old pleurisy) were regarded as the outward expression.

It is not my practice to remove serum from the chest while the fever of a pleuritic process lasts, unless it embarrasses breathing or circulation. Neither of these functions was disturbed by it here after I saw the patient, so I treated the man on general principles, and waited for his fever to subside. While I was waiting he died, as I have told you.

The autopsy showed a state of affairs for which I was quite unprepared.

This is the record of the essential parts of the autopsy: Left pleural cavity contains 125 c.c. of blood-stained serum, and there are firm old adhesions behind. Left lung is completely consolidated, very firm and hard. Its surface is coarsely lobulated. A few distended air-cells are seen on the anterior surface of upper lobe, but elsewhere it does not contain any air. On section it is found to be firm and solid throughout; it has a mottled appear-

[1] Read at a meeting of the Practitioners' Society, March 3, 1893.

ance. light-gray and reddish areas alternating. Bronchi contain clotted and fluid blood.

Right lung is increased in volume. extending a short distance beyond median line. Individual air-cells can be seen over its entire surface. There are numerous red areas about one-half a centimetre in diameter, seen over surface and on section. Bronchi are filled with frothy blood. I show you here the heart, aorta. and left lung. Aorta shows very slight atheromatous changes generally. At junction of arch with descending aorta is an oval opening 3 × 2 ctm.. which leads into an aneurismal sac, whose diameter is about five centimetres. It is partially filled with fibrin, and along its inner aspect is adherent to vertebral column. This aneurism presses upon left primary bronchus and somewhat flattens it. It communicates with bronchus by two openings. The upper opening is covered with a fibrinous plug which projects into bronchus, completely filling it. This opening is nearly one centimetre in diameter. The other opening, which is evidently recent. is one centimetre below this. and is not protected by fibrin.

The only other fact of importance in the autopsy was the presence of 250 ctm. of pure blood in the stomach.

The microscopic appearances of the left lung are extremely interesting. In this section which I show you under the microscope. it will be seen that serious changes have occurred. In many places the lung-tissue is destroyed: there is no trace of the alveoli. and their place is occupied by blood and leucocytes. In other places the lung-tissue is plainly visible, but much changed in structure. There the walls of the alveoli are greatly thickened and the alveoli are filled with blood, or leucocytes, or a mixture of the two.

The explanation of these changes and of the rather unusual physical signs. is simple enough in the light of the autopsy.

The original opening into bronchus from aneurism probably occurred a month or more before death. The plug of fibrin at the site of this opening which (together with the pressure of the aneurism occluded the bronchus. did not completely close the communication between aneurism and bronchus. Small amounts of blood were constantly inspired into bronchi, and gradually reached alveoli in many places. Secondary structural and other changes occurred as just described. in consequence of disturbance of function of lung, caused by occlusion of bronchus and hemorrhage taking place into bronchus constantly, below site of occlusion of bronchus.

Just before he died a second opening took place. from aneurism into bronchus. which allowed a free escape of blood. and was the immediate cause of death.

Bronchial voice and breathing were not heard over much of consolidated lung. because occluded bronchus became incapable of transmitting respiratory sounds to lung parenchyma. and thence to ear of auscultator.

Thus auscultation and percussion both, can lead one to an erroneous diagnosis. if a main bronchus is occluded: and in this case neither the occlusion nor its cause could have been diagnosticated by any of the means of physical exploration which we possess.

Physical Results of Hard Tramping.—The effects upon the physical system of the 400 young men who walked in ten days from Paris to Belfort, a distance of 307 miles. are stated to have been: Diminution of stature by several centimetres: lessened bodily weight by from twenty-one to twenty-four ounces: against expectation, heart-beat normal. except in four cases; average pulse-beat from eighty-five to ninety a minute. Blisters and other sores of the feet troubled but very few of the participants. notwithstanding most of them were accustomed to only a sedentary life. This is ascribed to their wearing soft-soled boots that did not compress the articulations of the foot. Their clothing was light and did not interfere with the movements of the chest. The pedestrians took food only moderately, consisting mostly of meat, eggs, tea. and coffee.—*The Sanitary Inspector.*

AN UNUSUAL CASE OF CEREBRO-SPINAL MENINGITIS.[1]

By W. GILMAN THOMPSON M.D.,

NEW YORK.

THE following case apparently commenced as an acute inflammation of the meninges of the brain and cord, which became chronic, but at the autopsy both these organs were so extensively degenerated as to give rise to some doubt in regard to the sequence of the pathological changes.

The patient. J. M——.ten years of age, was brought to the Presbyterian Hospital. having been injured by a sudden fall from a fire-escape on which a few hours before he had been playing with other boys. The cause and the distance of the fall could not be ascertained. Immediately after the fall the boy became comatose. He lived for ten weeks in the hospital, when he finally died of exhaustion. During this entire time he remained comatose, the symptoms (which were attributed to extensive lesions of the meninges and of brain and cord), progressed. and emaciation soon became phenomenally great. Nearly every bone in the body appeared on the verge of bursting through the skin. and one could almost meet the fingers by pressing through the back and abdominal wall. As the ribs glided beneath the skin in the movements of respiration, it seemed as if the bones would certainly tear their way through. and the face looked far more like a death's head than that of a living being. The boy lived a full month after reaching this degree of emaciation, and the photographs herewith presented were taken at this time.

On admission to the hospital there were no evidences of contusion or of fracture about the head or elsewhere. There was decided rigidity of the right side. slight rigidity of the left side. deviation of the mouth and tongue to the right. The pupils were normal in size and reaction. The patellar reflexes were both exaggerated. the right more so than the left. Urine and fæces were voided involuntarily. In three days the reflexes all became absent, and the rigidity in both legs became equal. Slight dilatation of both pupils was then observed, the left being the larger. The patient was kept upon a water bed. but despite every care, enormous bed-sores soon developed over the sacrum and glutei. In a few days the arms became rigid and somewhat flexed. A month before the patient's death his condition was as follows: Both forearms were tightly flexed upon the arms. the elbows were pressed to the sides. the wrists were flexed. and the fingernails were buried in the palms. The legs were semi-flexed and everted. the ankles were both everted. No opisthotonos. Risus sardonicus very pronounced. The muscles of the extremities were so rigid that the legs and arms could not be extended without risk of fracture. The only evidence of sensation was found on irritating the skin over the face when more pronounced grimaces were made. The mouth was kept rigidly open. The boy was fed by a nasal-tube. and in this manner abundant milk and preparations of beef were given. Constipation was habitual, but the food administered was apparently digested. as indicated by the normal character of the stools. Nutrient enemata were also given. Four days before death the left cornea became opaque and it ruptured. At intervals the patient emitted a peculiar cry. resembling the *cri hydrocéphalique*.

The temperature exhibited extraordinary fluctuations. produced probably by the suppuration which was subsequently found in the meninges. A range of 10° F. was noted. During the first week the temperature varied from 100° F. to 103.5° F.. with one record of 107° F.. and another of 105° F. During the ensuing fortnight the temperature fell slowly and did not rise above 103° F. After this the temperature again became very irregular. and after remaining normal for a week or ten days it would suddenly rise without chill to 105° F.. and for several days before death it was 97° F. The pulse ranged between 58 and 132, frequently exhibiting a vari-

[1] Read at a meeting of the Practitioners' Society, March 3, 1893.

ation of fifty beats within two or three hours. There was no cardiac bruit. The breathing was feeble, but the respiratory rhythm was not disturbed. Four weeks before death an eruption of dusky red macule, about two lines in diameter, appeared over the body and limbs, but not on the face. There were some two hundred spots in all. They did not become hemorrhagic, but slowly faded out.

Autopsy.—The only lesions of special interest at the autopsy were found in the brain and cord. Calvarium thin, otherwise normal. No fracture. Dura mater much thickened, and beneath it, forming a fluctuating mass on the left side, over the frontal and parietal lobes, were about two ounces of blood-stained serum and pus. Considerable brown-red pigmentation of the dura over most of its surface. Pia mater congested and thickened, especially on the left side. Over entire left hemisphere the convolutions were infiltrated with brown-red pigment, and showed advanced atrophy. Entire brain very soft; weight, thirty-seven ounces.

A microscopic examination of the brain was kindly made for me by Dr. J. H. Linsley, and was reported as follows: The cerebral cortex contains an unusual number of nuclei, and small, round cells. Along the course of the capillaries are many small, round cells, which are also very abundant in some of the perivascular spaces, and in certain areas of the pia mater. Elsewhere the pia is thickened, but not infiltrated. The cerebral vessels are greatly distended with blood, and the pia contains a large number of pigment granules. The cord meninges are intensely congested. The cord itself is extremely soft, tearing by its own weight, and being unfit for satisfactory microscopic examination.

The features of the case of chief importance are, first, the suddenness of the invasion, which at first suggested a possible traumatic origin, though no evidence of traumatism was discovered. There were no cases of epidemic cerebro-spinal meningitis in the city at the time, and none were reported by the Health Board for some weeks after the case came under observation, hence it was a distinctly sporadic case.

Secondly, the long duration of the case, notwithstanding the sudden onset and the extraordinary degree of emaciation which persisted so long before death; and finally, the lateness of appearance of the eruption, the extreme degree of flexion and rigidity of the joints, and the irregularity and extensive range of temperature.

Tropacocaine.—Dr. Geissel has isolated this alkaloid from the small-leaved coca plant found in Java. It is a benzoyl-pseudo tropein. The hydrochloride is easily soluble in water, and is the salt used in the author's experiments. If a one per cent. solution be put in the eye of a frog, complete anæsthesia will be produced in a few seconds, or at least a minute. The action is just as marked in the eyes of rabbits, varying in intensity and rapidity of action with the degree of concentration. Comparing it with cocaine, Geissel found that weaker solutions of tropacocaine produced anæsthesia, and that if solutions of equal strength of the two substances were used, the tropacocaine caused anæsthesia much more quickly than did the cocaine, and its effects lasted longer. Mydriasis was observed in some cases, but was not constant. Subcutaneous injection of the solution caused local anæsthesia; the anæsthesia appeared sooner than with cocaine, lasted longer, and spread itself over a greater surface. The author has proven, by action on frogs, rabbits, and dogs, that the physiological action of the drug is almost exactly similar to cocaine, with the important difference that tropacocaine is much less poisonous than cocaine. Schweigger has found that a three per cent. solution caused about the same grade of anæsthesia as similar solutions of cocaine. It lasts a shorter time, but can be continued by fresh instillations of the drug. Sometimes a slight mydriasis was caused. Ischæmia never occurred. A slight hyperæmia sometimes followed its use.—*Therapeutische Monatshefte.*

VAGINODYNIA—PERINEAL SPASM.

By E. F. FROST, M.D.,

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Although vaginodynia is usually included under the title of vaginismus in our text-books, it will, nevertheless, be apparent that vaginodynia is worthy of separate consideration, and that any clinical facts that can serve to more definitely distinguish the two conditions will be of prime import as regards intelligent treatment.

The history of this affection, from the time of its earliest description to the present, has been that of assertion and denial as to its separate existence; and yet, while it has been clearly recognized by few, by many vaginodynia is not, as yet, recognized as a separate affection. One of the earliest observers, and the one to whom the term vaginodynia is due, Sir James Y. Simpson, distinguished vaginodynia from vaginismus in that in the former there obtained muscular contraction along the whole vaginal canal, whereas in vaginismus the contraction is merely at the introitus.

The clinical history of vaginodynia is that of the sudden attack of neuralgic pain throughout the female reproductive organs, without apparent adequate cause; attacks so severe, with sharp lancinating pains so intense, as to cause such agony that the physician is summoned in great haste. This condition obtains among married and single girls and women. After a duration of this condition for several hours, if left to itself, the pains gradually fade away, the patient falling asleep from exhaustion.

Symptoms.—On approaching the bedside the physician finds his patient in such costume as she may have worn at the time of the attack, because her distress is sufficiently great to prevent disrobing, for her whole being is absorbed in the one idea of pain. Breathing heavily and rapidly, even panting, tossing, and turning, now drawing up the knees, now straightening them, sobbing and groaning, to the question as to where is her distress, she, with as few words as possible, says, "Away down," or, "My womb." Possibly already attendants have placed hot cloths to her abdomen, or may have given hot drinks, but to no avail. If the woman be advanced in pregnancy, the question of labor at once arises, but the pain is not remitting, nor has there been any "show," nor have the "waters broken." To be assured, with some but not great difficulty a finger may be introduced into the vagina, when it is determined that it is not a case of labor. If the woman be not pregnant, with no history of uterine trouble, with no history of traumatism, it is very easy to conclude it to be a case of colic of some kind.

But little is usually done in the way of physical examination at the time, because the case demands relief, so that the opiate or anæsthetic is at once brought to bear, the physical examination being postponed until ease is obtained. This obtained, physical examination reveals nothing, absolutely nothing, that could in any way account for the trouble. So, therefore, in accordance with the mystical prevision of the specialist, it is decided to be uterine colic, ovaralgia, vaginitis, pelvic peritonitis (masked), coccygodynia, etc. The bladder is not over-distended, nor is there any unusual hyperæmia of the external genitals, nor any tumefaction or cystic growth discoverable. There is no increase of temperature, although the countenance be flushed. There is no vomiting, no nausea, except occasionally, and that slight and from the pain. In fact, there is no symptom but pain, and that is gone when the administered treatment has taken effect. The next day the patient is well in every particular, only, perhaps, and in all probability, to soon experience another attack. These attacks may occur again and again with increasing or decreasing frequency, but of no regular periodicity. Should the patient be menstruating at the time of an attack, of course the diagnosis of dysmenorrhœa at once satisfies many, especially when others of the same family have suffered at such times.

Should we, on the contrary, make our physical examina-

tion at once on meeting the patient, no palliative having been previously administered, we would learn much, and the secret of the trouble would be revealed. The recti abdominalis and other abdominal muscles are tense, and pressure, if sufficient, increases the pain. Hence, according to the law that pressure increases the pain of inflammation and relieves the pain of spasm, we might conclude that we had to do with an inflammation.

Let us now attempt to introduce our finger into the vagina, the patient reclining on the left side, knees drawn up, operator at her back, using the forefinger of the right hand. There will be experienced on the part of the patient the greatest pain at the least touch, as the finger is about to pass the introitus, there being felt a tightly contracted sphincter vaginæ, to evade which the finger is pressed against the anterior vaginal wall. At once we have the sure conclusion that we have to deal with a case of vaginismus, and the examination is ended for the time being, when, after relief has been obtained from drugs, the etiological factors are to be sought in hypertrophied caruncular myrtiformæ, perhaps.

Instead of trying, however, to avoid the sphincter vaginæ when introducing the finger, let the examiner rather avoid the anterior vaginal wall and press backward with considerable force against the sphincter, gradually, even abruptly, introducing the finger farther in, and pressing backward more and more powerfully. Then, as soon as possible to do so without unduly pressing the anterior wall, introduce the middle-finger as far in as possible, avoiding the cervix uteri as well as the anterior vaginal wall, by drawing the whole pelvic floor backward. The pressure on the pelvic floor adds nothing to the pain, and, greatly to the surprise of all concerned, the moment the pelvic floor is retracted, using the two fingers as a hook, the pain and distress completely cease, as if by magic. If now the operator relax his pressure, the pelvic floor again contracts, and again the patient cries out with pain. If now, while still retracting the pelvic floor, the operator desires to extend his observations, he may lift one of the already introduced fingers against the cervix uteri, when it, the cervix, will be found to be hard, almost rigidly so, and extremely sensitive on its dorsal aspect, but not nearly so sensitive on its anterior aspect. With care and a little persistence, it will be found that the uterus may be moved about quite freely, rigid though it may be in its own contraction.

By this time the operator's fingers and hand, and even the arm, have become tired, but to relax means a renewal of the pain. But he may relax in some degree, for temporary relief to himself. By this time the physician will have concluded that he has to do with a tonic spasm of the perineum, or rather of the whole pelvic floor. Therefore the physical examination reveals this condition of things, namely, a tonic muscular spasm of the muscles of the uterus, abdominal walls, and pelvic floor, whereby the cervix uteri is pressed downward so as to come between the upper and nether mill-stones, the one, the vaginal roof or anterior wall, the other, the contracted pelvic floor. The cervical ganglion of the sympathetic nervous supply of the uterus comes in for its share of the squeezing, therefore.

Etiology.—To determine the cause or causes of this affection, is to investigate the general and special causes of muscular spasm. Symptomatic and anatomical considerations show it to be, at least, a reflex neurosis. If reflex, reflex from what? Reflex from nervous irritation, and this is true in whatever part of the body it may arise, whether uterus, bladder, rectum, vagina, stomach, or brain. Investigation and observation show it to be especially predominant in the hysterical—in fact, in the writer's experience, with but one exception, it has been so, and in that one case there might be question as to an absence of hysteria. This case was dysmenorrhœic. So far, while no doubt any acute or chronic inflammatory condition of the pelvic organs might give rise to the spasms and accompanying hysteria, yet in all but one of the writer's cases, and he believes even in that, the irritation was purely emotional, for careful examination and inquiry revealed no physical cause.

Traumatic vaginodynia the writer has seen arise from too severe manipulation in uterine examination, and also from too harsh applications to the cavity of the uterus.

Diagnosis.—The diagnosis presents usually but little, if any, difficulty. Sudden onset of severe lancinating pain, continuous, in the inferior pelvic region referred to the uterus. The presence often of hysteria, especially the peculiarly colored iris of hysteria; the presence of the contracted perineum.

The ultimate diagnosis as to cause would be to seek and discover any source of nervous irritation, referable to any primary diseased state, which would properly be discussed under an appropriate heading.

We have to differentiate vaginodynia from vaginitis, cystitis, ovaralgia, passage of renal calculi, coccygodynia, dysmenorrhœa, retention of urine, and neuralgia of the rectum.

The history at once disposes of cystitis and retention of urine, and besides, examination of the urine would determine the former and the passage of the catheter the latter. Of the neuralgic affections, if there be passage of renal calculi, examination and search for the calculi would determine the result, as would also the location and direction of the pain. Ovaralgia is distinguished by the peculiar sickening pain and its location, and the absence of the perineal spasm. Neuralgia of the rectum, by location of pain and absence of pain in the anterior vaginal wall. Coccygodynia, by the location and absence of pain in the anterior vaginal wall, and want of relief from perineal retraction. From dysmenorrhœa, by absence of the spasm and the discovery of the impediment to the menstrual discharge. The most difficult differentiation is to diagnosticate between vaginodynia and vaginismus. The real difference is to be found in the extent and location of the seat of spasm. In the former, vaginodynia, the contraction involves the whole pelvic floor; in the latter, merely the parts surrounding the introitus vaginæ.

It is to be carefully borne in mind that anyone, or several, of these conditions may coexist with the vaginodynia.

The prognosis is always favorable, when there is no accompanying organic cause, as to both temporary and permanent relief.

Before discussing the treatment, attention may well be given to the name applied to this affection. Vaginodynia implies pain of the vagina and nothing else, and has nothing to do with the cause. While pain is the absorbing symptom, yet equally prominent is the muscular spasm. The immediate cause of the pain being a muscular spasm of all the muscles of the pelvic floor, it is suggested at once to denote this condition by the term perineal spasm.

Treatment.—The treatment, evidently, is to relax at once the perineal spasm. To do this effectually, do not await the slow action of drugs, but at once, carefully avoiding the anterior vaginal wall and cervix uteri, introduce two or more fingers into the vagina, and press back the perineum. Then, with the thumb externally pressing against the lower segment of the sacrum as a fulcrum, stretch to its utmost the vaginal canal, even to the extent of giving some pain from the stretching, even bending back the coccyx. This is to be held stretched for ten to twenty minutes, or until the perineal muscles are sufficiently tired out to prevent their contracting again. This is most tiresome for the physician, but will well repay him. The relief to the patient is instantaneous. Other periodic attacks are quite certain to follow, after an interval of from a few hours to a few days, when the same procedure is to be again employed. Such treatment causes, after but a few applications, an entire cessation of the recurrences of the spasm. The fingers are to be preferred to any speculum or dilator, as they are not so harsh to the parts stretched, and there is no danger of pressure against the anterior vaginal wall or cervix uteri.

Among the drugs in the interval, fluid extract of conium and fluid extract of belladonna have been found by the writer to be the best. For obvious reasons, opium is to be avoided, except to relieve pain when a physician is not within reach. Curare might possibly be used to some advantage. In the dysmenorrhœic, extract of viburnum, 3 j. every half hour, during an attack, has been quite efficacious, even without perineal retraction. General treatment to be as indicated.

Remark.—It is the belief of the writer that this perineal spasm is often the most prominent and the really distressing symptom in most cases of dysmenorrhœa.

DISEASES OF THE PNEUMATIC SINUSES OF THE NOSE, AND THEIR RELATION TO CERTAIN AFFECTIONS OF THE EYE.[1]

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The subject of the diseases of the pneumatic sinuses of the nose, especially in their relation to diseases of the eye, offers an interesting and, as yet, comparatively unexplored, field of clinical observation. A single paper or a single discussion will not be sufficient either to prove or disprove that there is any important connection between them; but the object of this short paper will be to invite attention to this subject in such a way as to induce further critical clinical observations. My own conclusions have been formed by a study of cases in this special direction in the ophthalmic and rhinological clinics, where I have been impressed with the frequency of ocular symptoms of more or less severity, in cases of cell disease, to some of which I will refer in this paper in support of my argument.

There can be no doubt that irritation of the nasal nerve by pressure, inflammatory action, or otherwise, has a distinct reflex or referred action on the eye and its appendages, which receive their sensory nerves also from the ophthalmic branch of the fifth nerve. But it is through the sympathetic system, by the vaso-motor disturbance, that the most important manifestations of sympathy, pathologically speaking, can be traced. This statement is well illustrated in the ocular irritation produced by a foreign body in the nasal nerve region. The manifestation of disease reflex is modified by the milder nature of the irritant, and usually by its longer continuance.

Since Grinning, in 1886, reported to this Academy cases of conjunctival irritation cured by cauterization of the turbinated bodies, I think it has become a well-established fact, by confirmatory evidence, that certain forms of conjunctivitis, lachrymation, palpebral irritation, blepharospasm, etc., may be relieved by judicious treatment of the nose; and conversely, that too extensive and unscientific destruction of the intra-nasal tissues may produce a like condition. A considerable variation from the typical may not produce eye symptoms, or if it does, they may be partially or temporarily relieved by treatment of the eye; or, there may be neither nasal nor ocular symptoms objectionable to that particular case. Yet that will not be an arraignment of the principle of ocular reflex, but it is a plea for conservatism in nasal surgery. Every irregularity does not need to be smoothed down. The artistic effect is not important. The progressive conservatism that conserves is a blessing to modern surgery, but the conservatism that condemns, untried, every innovation is a misfortune to any science.

That which is true in regard to the relations of the eye with the structures of the nasal fossæ is also true of the accessory sinuses, with the important additional factor of contiguity to the orbit and vessels and nerves, and added gravity from their close relations to the encephalon. For these reasons the early diagnosis of cell disease is of great value, and of the same importance as in mastoid suppuration. From the shortness and greater calibre of the connecting ducts, the conditions are more favorable for the infection of the nasal cells from a catarrhal disease of the respiratory tract, than for the infection of the middle ear and mastoid cells through the Eustachian tube.

It cannot be said that cell diseases, acute or chronic, catarrhal, suppurative, or necrotic, are particularly rare. They are probably more common than recognized even by specialists, because of the difficulties surrounding their diagnostication. The subjective symptoms are obscure, no special sense is primarily involved, and with the exception of the frontal sinus and antrum where transillumination may be employed, it is essential to observe discharges in the process of escape from the cells. Repeated examinations of a suspected case may be necessary in order to find a diseased cell in a state of active eruption. For the antrum and frontal sinus transillumination offers a convenient, graphic, and fairly reliable method of diagnosis, the glow being modified in proportion to the opacity of the exudate or thickening of the lining membrane. A sharply bent silver Eustachian catheter can be passed readily into the antrum, and a small probe usually into the other sinuses, on the removal of which pus will follow if it is in a position favorable for drainage. If either the frontal or anterior ethmoidal cells are diseased the antrum will invariably become infected, as the current of discharges from the cells above is deflected into the antrum by the semilunar fold below the hiatus semilunaris. If this semilunar fold be clipped away, the openings of the three anterior cells may be seen forming a triangle, the apex of which is the opening of the infundibulum, opposite the upper portion of the anterior tip of the middle turbinated body. Pus coming from the anterior ethmoid cells will appear from under the middle turbinated at a point further back, while if it rolls up from below it is from the antrum.

Disease of the cells is always associated with increased or perverted secretion, therefore there is a natural division into two general classes—disease with retention, and disease with free drainage. Between these two classes there is a wide difference in history, in danger, and in treatment. Suppuration with free drainage of one or more of the cells may exist indefinitely, without producing symptoms referable directly to the seat of disease. A little post-nasal drop, considerable discharge on getting up in the morning, may not be considered by the patient of sufficient importance to be mentioned, while the headache may be referred to the eyes or some other cause. If there is retention there will be pain in proportion to the pressure required to force the stenosed opening, or occasionally to produce dilatation of the cell. Some patients have a morning headache until the changing positions of the head allow the sinuses to drain through the nose or throat. The pain of ethmoid disease is referred to the eye or orbit, and is accompanied by injection of the conjunctivæ and sometimes by marked circulatory disturbance, such as ciliary congestion, hyperæmia of the disk, and even, as reported by Eales,[1] of Birmingham, of optic neuritis.

In his case there was no orbital cellulitis, and no symptoms to attract attention to the nose until the sudden escape of a large quantity of pus, when the neuritis at once subsided. Lenox Brown[2] has reported a case of glaucoma cured, after iridectomy had been made, without improvement, by removal of nasal polypi.

In explanation of this case, it will be remembered that nasal polypi, according to the views of Wakes and others, are secondary to ethmoidal disease, and that several reports have been made of contraction of the field of vision, and of increased ocular tension, in connection with disease of the various cells. Numerous cases are recorded of rupture of ethmoidal polypi through the orbital plate, and also of orbital periostitis and cellulitis from extension or infection from purulent ethmoiditis.

[1] Read before the New York Academy of Medicine, October 17, 1892.

[1] Birmingham Medical Review, 1884, vol. xvi., p. 167.

[2] Diseases of the Nose and Throat. London.

In antrum disease the symptoms are much more indicative. The facial pain and heaviness ; the infra-orbital neuralgia from implication of the infra-orbital nerve in its canal in the roof of the antrum, all point to the seat of disease. Many regard supra-orbital neuralgia a frequent symptom, but that is more especially connected with ethmoid disease, and would indicate that the ethmoid cells were also affected. The pain is frequently referred to the eye, and is frequently worse in the morning.

Pagenstecher[1] has recorded cases of orbital cellulitis with lowered vision, and narrowing of the visual field, in which there were all the symptoms of antrum distention, relieved by extraction of carious teeth which projected into the antrum. A portion of the antrum boundary of the infra-orbital canal is sometimes deficient, and frequently very thin, making an easy passage-way for infectious material from the antrum into the orbit. In the *Archives of Ophthalmology* Nieden[2] has recorded a case which exhibited constant monolateral blepharospasm, lachrymation, and photophobia, which disappeared on relieving pent-up secretions in the antrum ; and two cases of polypoid degeneration of the ethmoid cells rupturing the os planum, producing increased tension, neuro-retinitis, and atrophy.

Burnett[3] has reported a case in which, four days after exposure, optic neuritis developed : four days afterward a sudden purulent discharge took place from the nose, whereupon the neuritis subsided but was followed by atrophy. The patient was rheumatic, and this was reported as an unusual manifestation of the rheumatic diathesis. Cases are mentioned in literature of orbital cellulitis and resulting abscess perforating into the nose through the ethmoid cells, but as we know cellulitis to be an infectious disease, and as those cases belonged almost exclusively to that constantly decreasing category of idiopathic affections, it is a reasonable question to raise if they may not have originated in an already existing, and unrecognized, disease of the contiguous sinuses.

There are good reasons for believing that, in many of those obstinate cases of asthenopia with varying muscular or accommodation irregularities, the disturbance of equilibrium is produced by the irritative action of a lesion somewhere in the distribution of the nasal nerve, either in the fossæ or sinuses ; that in those selected cases treatment of the nose will bring about immediate and lasting relief.

I have in mind a woman, aged thirty-three, who came under my care at the New Amsterdam Eye and Ear Hospital, who suffered so severely from asthenopia and orbital pain that she could not use her eyes for any continued time about her ordinary household duties. I found her refraction hypermetropic, 2.00 D. in the right eye, with vision $\frac{2}{20}$. In the left eye she had hypermetropic astigmatism against the rule about 1.50 D., but vision poor on account of a central choroidal hemorrhage. Accommodation was so paretic that Jaeger No. 3 could be read only with difficulty.

On examination of her nose I found left hypertrophic ethmoiditis, with firm pressure against the septum. I considered this to be one of the factors in the production of the asthenopia, and therefore cauterized the middle turbinated thoroughly with probe-fused chromic acid, and directed her to return in two days for glasses.

She did not appear again at the clinic for six months, when she came complaining of an acute tonsillitis. When questioned as to why she did not return for her glasses, she said her headaches and eye trouble immediately disappeared after the treatment of her nose, and she now had no need for glasses. She could read Jaeger No. 1 fluently.

The sphenoidal sinus offers an especially attractive field for study, and I regret the short time for preparation of this paper did not allow the collection of anatomical and pathological specimens for exhibition this evening. It will be remembered that upon the thin roof of this extensive sinus rest all the nerves and vessels of the eye, as well as the three branches of the fifth nerve, and that the drainage is from the upper portion of the cell. This anatomical arrangement favors the retention, if not incarceration, of pathological secretions, which, by decomposition, become intensely irritating to the mucoperiosteum and the thin lamella of bone which separates it from the orbital nerves.

It has been shown, in chronic suppuration of the frontal sinus and mastoid cells, that over the points of greatest tenuity the dura mater takes on a low grade of chronic inflammation resulting in considerable thickening, without exciting any cerebral symptoms. A similar process takes place in chronic suppuration of the sphenoidal sinus, and any of the ocular nerves may become implicated by direct extension of the inflammatory process, or affected indirectly by pressure of the exudate, or by its secondary contraction, either on the body of the sphenoid in the vicinity of the chiasm, or at the optic foramen or sphenoidal fissure, or for a variable distance into the orbit.

It would seem reasonable to suspect that this extensive exposure of the optic nerve to a pneumatic cell in which disease is certainly not rare, may account for some of those obscure cases of retro-bulbar neuritis, scotoma, hemianopsia, and neuritis ; and that a like implication of the motor nerves may be responsible for some of the disturbances of equilibrium, either by irritative spasm, paresis, or paralysis.

The occurrence of peripheral limitation of the visual field and optic atrophy in cases of so-called nasal hydrorrhœa is significant in this connection, as a large portion of the discharge is poured out of the cells, and a condition of polypoid degeneration of the mucous membrane usually exists in those cases.

In simple unobstructed suppuration of the sphenoid sinus the direct symptoms may be very meagre. There is usually more or less pain at the base of the skull. In one case an aching sensation was complained of between the ligamentum nuchæ, and could be produced at will by the irritation of a probe about the orifice of the sphenoid sinus. There is always some post-nasal discharge, but this is also a symptom of suppuration of the other cells. In a large proportion of the cases of post-nasal catarrh which have come under my observation, I have been able, by repeated examinations, to trace the source of discharge into some of the cells, as in the following case :

Miss S. A——, aged nineteen, complained of an annoying post-nasal discharge. She suffered from intermittent basilar headaches, extending into and between the orbits. She had transitory attacks of hyperæsthesia of the retinæ, pain in the right eye, and blurring of near vision, on account of which she would be obliged to desist from her work. On examination of the nose, an accumulation of inspissated secretion was found about the middle turbinated, on both sides. The source of this was found to be the anterior ethmoidal cells, and after repeated examinations pus was found escaping from the sphenoidal sinus, on the right side.

The examination of the eye was negative, with the exception of a marked hyperæmia of the optic disks.

This case was treated with stimulating applications over the affected cells. The discharge gradually subsided, coincidental with which the headaches became less frequent and milder, and the eye symptoms entirely disappeared.

I have now to report a final case, which illustrates the damage which untreated cell disease is capable of doing.

P. H. P——, aged thirty-seven, designer by trade, suffered, during the year 1889, from a purulent discharge from the nose and throat, which was especially profuse in the morning, and accompanied by severe pain between the eyes, extending backward and into the left cheek. The pain was periodical in character, and was relieved by a discharge from the nose or throat. Vision was good except during the paroxysms, when it was blurred. He consulted a laryngologist at one of the hospitals, who said he had an abscess of the septum and disease of the cells, and he was treated at the hospital with a spray.

[1] Archives of Ophthalmology, 188, p. 17. [2] Ibid., 1887, 431.
[3] American Journal of Ophthalmology, April, 1885.

During his last visit at the hospital the surgeon observed that the right pupil was dilated. Soon after the patient went to sea, taking his spray with him. A few days after sailing, a violent pain began in the head, the right temple, and the right eye. He did not observe anything unusual in the appearance of the eye. But he did notice that sight began to fail from the right side, drawing in toward the centre, so that, as the blindness increased he was only able to see with that eye the object at which he directly looked. In seven days, even central vision disappeared, and he was totally blind in the right eye. The left eye immediately followed in the same manner, accompanied by dilatation of the pupil and severe pain.

In thirty days he was again in New York, and went the rounds of the hospitals for what he was told was inflammation of the optic nerve. He was treated with iodide of potash, as high as eighty-five grains three times a day, until his stomach rebelled. He also received the strychnine treatment, but without improvement. His urine was examined with negative results, but no one would listen to his explanation of his nose disease, and his nose was not examined.

For the past two years there has been daily discharge from the nose and throat, with occasional return of the old pain. During one of these paroxysms of pain he applied at the New York Polyclinic for treatment. The patient was anæmic and cachectic, and was then suffering from orbital and interorbital pain, and facial pain on the left side, where the infra-orbital nerve was sensitive at its exit from its canal. Pupils moderately dilated, optic atrophy both sides, with vessels small and straight; no perception of light. On examination of the nose I found necrosing and cystic ethmoiditis both sides. The entire lateral masses of the ethmoid pressed firmly upon, and in places adhered to, the septum, through which there was a large perforation; pus appeared from beneath and above the middle turbinated, which had the typical cleft or duplicated appearance of necrosing ethmoiditis; pharynx normal; through the rhinopharynx pus could be seen escaping from the posterior ethmoidal and sphenoidal sinuses.

I enlarged the hiatus semilunaris and passed a probe through the infundibulum, upon which a large quantity of pus flowed from the frontal sinus and antrum. The pain subsided promptly. I have since made free drainage for the ethmoid cells by removing the middle turbinated. He has had no pain since free drainage was instituted, and is improving markedly in physical condition.

This was, beyond a reasonable doubt, a case of optic neuritis and atrophy caused by suppurative disease of the pneumatic sinuses.

My conclusions are, that the diseases of the pneumatic sinuses of the nose, and especially of the ethmoid and sphenoid, are much more important etiological factors in the causation of ocular diseases than has been generally recognized—the ethmoid diseases being more especially manifested in intra-ocular and conjunctival circulatory disturbances, and in the production of a group of symptoms which may be called asthenopic; while the diseases of the sphenoidal cells are more likely to affect the optic nerve by the extension of a slow, conservative, dural inflammation either in a functional or an inflammatory way; and that the motor nerves of the eye may, in a like manner, be affected.

I believe it should be adopted as a routine practice, in cases of ocular disturbance where the etiology is somewhat obscure, and in all cases of retro-bulbar disease, to make a thorough exploration of the nose and accessory sinuses. Repeated examinations may be necessary before sinus disease can be excluded, but should it be found, the same principles of early and free drainage, and cleansing which govern the treatment of suppurative mastoiditis should be applied to the treatment of the parallel disease in the pneumatic sinuses of the nose.

There are said to be nearly two hundred "policlinics," in other words, private dispensaries, in Berlin.

Progress of Medical Science.

A New and Rapid Method of Removing the Uterus.—At a recent meeting of the Kansas City Academy of Medicine, Dr. Emory Lanphear presented a number of fibroid tumors, sarcomata, etc., removed by a new method of abdominal hysterectomy. The abdomen and vagina having been carefully sterilized, he makes an incision in the median line terminating as close to the pubes as possible, draws the uterus with one tube and ovary to one side, and applies a clamp to the broad ligament; a strong ligature is passed a half inch away from this, including the blood-vessels, and tied; the intervening tissue is then cut with scissors. Upon the opposite side the same procedure is carried out. When done, the uterus (hitherto held down by the broad ligament) can be lifted up into the wound and separation from bladder and rectum easily accomplished; these incisions, before and behind, are carried into the vagina, when a Kelly's or Polk's clamp is introduced through the vagina as close as possible to the uterus, its points reaching the ligature already tied in the broad ligament. As soon as properly applied it is closed and its fellow clamp inserted upon the other side, when the uterus is quickly cut away with curved scissors. The pelvis is irrigated and the abdominal wound closed and drainage made through the vagina, as in cases of vaginal hysterectomy. The clamps are removed in forty-eight hours. The operation can be done in twenty-five to thirty minutes, being much easier than even vaginal hysterectomy with clamps. By the rapidity allowed and by the good drainage secured, Dr. Lanphear thinks this operation can be done almost as safely as an ovariotomy—certainly as safely as a vaginal hysterectomy: and it is much preferable to any method which leaves a pedicle or stump behind. He finds it is not necessary to unite the bladder to the rectum, as union takes place just as quickly without sutures as with them.

Tabes Dorsalis and Its Treatment.—In the *Journal de Médecine de Paris*, September 25, 1892, Glorieux gives an abstract of Leyden's recent paper on tabes dorsalis and its treatment. Modern therapy, according to this writer, endorses too exclusively local chemical or mechanical treatment, and only values specific remedies or those which directly attack the morbid process itself. But besides the morbid process, there is always the general condition; and besides the disease, the man himself exists. Exact treatment, to be efficacious, must include both the science and the art of medicine. It must concern itself with everything that can relieve and ameliorate conditions of suffering, as well as that which cures, or is supposed to cure. In Romberg's time a fatal prognosis in tabes dorsalis was the only one possible. To-day, thanks to the earlier diagnosis that can now be made, the tabetic may hope for radical improvement, even if complete cure remains doubtful. Nitrate of silver, iodide of potassium, chloride of gold, arsenic, ergot, and strychnine have not fulfilled this early promise of arresting or retrograding pathological tabetic processes. Leyden, rejecting all ideas of syphilitic origin, disapproves of mercury in tabes, having no cures to record from personal observation; and advances the idea that where mercury has proved efficacious the case was probably one of multiple neuritis. The comic side of Constantin Paul's method of regenerating atrophied nerves by means of extracts of gray matter—notably gray matter from the sheep's brain—does not escape Leyden, who passes it by with a shrug, and recalls to the public mind similar experiments with products furnished by the ass in Pliny's time. But they wore their rue with a difference: then the assinine extracts were swallowed, not injected.

Baths in the treatment of tabes have always been considered of great importance. Leyden particularly recommends Rheims, Teplitz, Wildbad, Gastein, Nauheim, Kissingen, and Aix-la-Chapelle. To this list may be added other modes of water treatment, as sea and river bathing, the cold shower and the cold pack. The last

two often relieve the characteristic lancinating pains. But in hydrotherapy the presence of the physician is as necessary as that of water; and only under the supervision of one versed in hydriatic principles is this mode of treatment permissible. Electricity is much vaunted as a remedial agent in tabes, and the author gives it its just due. While it may have no direct influence upon pathological anatomy, it acts favorably upon peripheral nerves; and these are distinctly concerned with the pathogenesis of tabes dorsalis. Rumpf has obtained excellent results by means of the faradic brush. To exercise the muscles is another reason for using electricity. And a third is the particularly attractive quality of this agent as a remedy, which in itself often serves to revive hope, no small element in human well-being. Leyden finds massage practically useless.

Among surgical methods, nerve-stretching, as advocated by Langenbuch in 1881, and pronated suspension, advised by Motschutkowsky, of Odessa, in 1883, and brought to public notice in 1885 by Charcot, are specially worthy of mention. Bonuzzi's method of stretching the spinal cord consists in doubling up the patient while he is lying down until the knees almost touch the shoulders. Leyden refuses to try this experiment, believing that suspension is sufficiently violent for the average tabetic. Hessig's corset meets with but slight favor, Leyden objecting seriously to orthopedic measures in spinal-cord disease. Gymnastics, in the broad sense of the word, the author greatly favors, as a kind of compensatory therapeusis. To diminish the ataxia by strengthening antagonistic muscles and to help patients to walk, means to keep them out of bed. To strengthen them through proper food, sustain their moral tone, and inspire hope, are essential elements in giving the courage and energy necessary to good results in treatment. Systematized mechanical exercises for the arms and legs, by means of mechanical appliances in Fränkel's institute, brings about wonderful improvement in the condition of the limbs. Leyden cites a case where a course of systematized mechanical movements under Fränkel's direction resulted in such marked improvement that the patient could stand alone and walk. His moral tone underwent complete change; and though the physical improvement did not remain permanently so marked as at first, the renewal of hope and courage had the happiest influence upon his subsequent career. In fact, Leyden insists that the physician's first duty, in regard to general treatment, is to uplift and revivify the patient's physical and moral forces. With truth that kills, the doctor has nothing to do. It is his office, in early stages of tabes dorsalis at least, to advise a quiet life equally free from strain and overwork; to teach the patient how to protect himself from sudden changes of temperature, from dampness and from cold; and to seek to relieve special symptoms as they arise.

Pathology and Diagnosis of Ophthalmoplegia.—An interesting treatise by Charles Savineau has recently been published in Paris. The *France Médicale* for September 2, 1892, pronounces it the most satisfactory study of the subject that has yet appeared. The author reserves the term external or extrinsic ophthalmoplegia for paralysis of ocular muscles outside the eyeball—in other words, for conditions of paralysis in the eye of muscles supplied by different nerves, of which the motor oculi is always one. Internal or intrinsic ophthalmoplegia is paralysis of the entire muscular supply within the eyeball. The coexistence of these two forms constitutes complete or total ophthalmoplegia, which is sometimes unilateral and sometimes bilateral. According to location of the initial lesion, the disease may be cortical, supra-nuclear, nuclear, radicular, basilar, and orbital. It may also be peripheral neuritic when its origin lies in the terminal branches of orbital nerves, and in the base and root of nerves within the peduncles. Nuclear ophthalmoplegia is generally bilateral, often external, but occasionally internal and mixed. The subacute or chronic external form is generally but not always nuclear. In acute condition the lesion is higher up. Internal ophthalmoplegia, on the contrary, must be attributed to lesions within the ventricle. When the mixed form appears, collateral symptoms alone can aid in differential diagnosis. The lesion is either nuclear or basilar.

In regard to duration, nuclear ophthalmoplegia may be chronic, acute, or subacute. The chronic form is stationary or progressive. In the latter case, the initial lesion may implicate other nuclei of the pons varolii, as the motor and sensitive nuclei of the trigeminus; and vaso-motor centres, inducing glycosuria, albuminuria, and polyuria; and even implicate the anterior horns of the spinal cord and thus cause progressive muscular atrophy. In other cases ophthalmoplegia appears as a complication of some spinal or cerebro-spinal disorder. Subacute forms are not so serious as other varieties. They follow certain infectious diseases and intoxications, and recovery is the rule. Even when of this origin, they may become chronic, or, as in infantile spinal paralysis, of which ophthalmoplegia is an evidence of a lesion in the pons varolii (*noyaux protubérantiels*), the subacute form may go on to recovery in all but one of the different ocular muscles successively. The ocular muscle in which the morbid condition remains undergoes atrophy. Acute forms are accompanied by serious cerebral phenomena, as vertigo, cephalalgia, mental aberration, and a tendency to somnolence, death resulting in a few days or weeks. This variety is not really nuclear in origin. It is a supra-nuclear paralysis, of which the cause is as yet unknown. The essential lesions occupy the gray matter in the boundaries of the aqueduct of Sylvius in that of the third and fourth ventricles and of the corpora quadrigemina

In the chronic form of ophthalmoplegia the nuclei of the pons varolii (*noyaux protubérantiels*) are primarily or secondarily at fault. The primary degeneration (superior poliencephalitis) corresponds to the primary lesion of labio-glosso-laryngeal paralysis (inferior poliencephalitis), and to degeneration in the cells of the anterior horns (poliomyelitis). The secondary degeneration accompanies locomotor ataxia, multiple sclerosis, general paresis, constitutional diseases, and dyscrasia induced by syphilis or diabetes. Subacute forms of ophthalmoplegia are found in infections, as diphtheria, typhoid fever, pneumonia, scarlatina; and intoxications by alcohol, tobacco, poisonous meat, lead, or oxide of carbon. Nuclear ophthalmoplegia, ordinarily bilateral, may also be unilateral, external, internal, or complete. These varied conditions are not easy to explain.

Supra-nuclear lesions, whether lesions of co-ordinating centres in the corpora quadrigemina or of sub-ependymal gray matter, produce in the eye paralysis of associated and conjugate movements. When this paralysis involves simultaneously the different associated movements, it constitutes ophthalmoplegia. Centres for voluntary movements of the eye are situated in the cortex. Conditions of disassociation of paralysis of voluntary and reflex movements belong to hysteria. Radicular ophthalmoplegia, due to lesions of the third and sixth pairs of nerves, exist only when there is hemiplegia of the opposite side.

When of basilar origin, ophthalmoplegia is complete, and unilateral as a rule. Diagnosis is confirmed by complications on the same side, as abnormities of the optic nerve, of the olfactory, or of the trifacial. The usual causes are basilar meningitis—tubercular or syphilitic—meningeal hemorrhage, lesions of the blood-vessels, and neoplasms. Orbital forms of the disease are sometimes due to primitive lesions of extrinsic muscles; but usually they have their origin in changes of the nerves themselves or in their terminal branches. Peripheral neuritic ophthalmoplegia is found in the course of locomotor ataxia, and is sometimes transitory in the early stages of the disease. Its chief characteristics are, first, its curability; and, second, the presence of spasm in the lavator muscle.

Pulmonary Respiration.—The following note was submitted to the French Academy of Sciences, in 1890, by Dr.

Charles Bohr: The difference in tension of the gases in arterial and venous blood is generally conceded to be the reason for the exchange of these gases in the pulmonary vesicles. But the difference in pressure is not the cause of this exchange. The absorption and elimination of gases by lung-tissue is analogous to the phenomena of glandular secretion. Like other organs, the lungs can only act under certain definite and special conditions. The special or intrinsic action of pulmonary tissue is the cause that regulates the tension of gases in the blood.

Another interesting record in connection with respiration is the experiment of Arthaud and Butte to demonstrate the existence of vaso-constrictor fibres in the pneumogastric. When a pneumogastric nerve is severed behind the membrana tympani in the frog, the lung on the injured side collapses by these experiments. In nervous disease, in hyper-pyrexia, and in some other conditions, there is notable diminution in the respiratory capacity of muscle. This constitutes a point of departure for new researches in pathology and treatment.

The Respiratory Capacity of the Tissues.—Before the *Société de Biologie*, January 18, 1890, Quinquaud read a paper upon this subject, of which an abstract appeared in the *Progrès Médical* of January 25, 1890. The tests and experiments of Spallanzain, Cl. Bernard, Paul Bert, and others, are well known. Erroneous interpretations came about because in their experiments a constant temperature was not maintained. Quinquaud's results are the following: Muscle, for every one hundred grammes at a constant temperature for three hours, absorbs twenty-three c.c. of oxygen; the heart, twenty-one; the testicle, sixteen; the brain, twelve; the kidney, ten; the spleen, eight; the lung, seven and a half; adipose tissue, six; bone, five; and blood, one. These experiments were repeated many times and lead to important conclusions. Muscle absorbs the most oxygen. The heart, constantly at work, uses less; while blood absorbs very little. Blood carries oxygen to the tissues, but combustion in the fluid itself is but slight. This is one important fact established, the vessels of the organ visibly dilate. This effect is clearly perceived by comparing the injured organ with the sound one after the first has been artificially expanded by the entrance of air through a tube introduced into the glottis. The result obtained is not due to cardiac influence, for if it were both lungs would be affected. It is a vaso-motor effect. When both pneumogastrics are divided, the second lung presents the same phenomena and becomes the seat of paralytic congestion.

Failure of the Creosote Treatment of Phthisis.—Dr. Alba brought this subject before the Berlin Medical Society. He said that the virtues attributed to it were by no means universally believed in. Patients, it was acknowledged by all, frequently improved greatly under its use, but the improvement was either accidental or at most a result of its good effect on certain symptoms. It had no specific influence whatever. The fact that the tubercle bacilli were in no way influenced by it lent support to this view. The author had observed numerous cases, but in no single one had he seen the tubercle bacilli diminish in numbers by its use, nor had he observed any lessened virulence in them. He was convinced from his own observations that the action of creosote was only a symptomatic one. The same improvements had been observed in cases where no drugs had been given and the treatment had been only dietetic and hygienic.

Dr. Fürbringer also stated that he had not ordered creosote for the last year or two. In one-half of the cases in which it was given no effect was produced; in a fourth it was directly injurious, it injured the appetite; in the last fourth the disease process went distinctly backward, the patients recovered themselves, and even objectively a refreshing improvement took place. When, however, he compared these apparent creosote successes with simple hygienic and dietetic results without creosote he was unfortunately not in a position to detect any difference between them.

Diet in Chronic Nephritis.—In a discussion on the most suitable dietary in chronic nephritis, which took place recently at the Academie des Sciences, Dr. Dujardin Beaumetz said it was not the albuminuria, but the accumulation of toxic substances in the economy that required attention. The indication is, therefore, to assist the elimination of these poisons, and to prescribe such a regimen as will most tend to limit their production. To this end severe mental and physical exertion should be avoided. As toxines develop in meat three days after the death of the animal, he thought meats not absolutely fresh should be avoided; also, for the same reason, fish, game, oysters, and cheese. Milk should form the most important part of the dietary, but it should be sterilized. He never saw the albuminuria increased by the administration of eggs. Meats should be well cooked. Those which contain a considerable amount of gelatin are the most suitable. Among the starches he placed a high value on rice. He thought it also desirable to limit, if possible, the formation of toxic substances in the alimentary canal by the exhibition of such intestinal antiseptics as benzo-naphthol and salol.

Dr. G. Sée advised a diet somewhat as follows: Milk, one litre; white bread, two hundred and fifty grammes; coffee or tea, five hundred grammes; macaroni, one hundred grammes. He thought drugs of little use to patients suffering from albuminuria. With the exception of caffeine and lactose, which sometimes prove very efficient, diuretics should be avoided. The digitalis group always proves injurious to the kidneys. Preparations of iron may add to the congestion present. Iodides and the salts of strontium and lime may render some service.—*International Medical Magazine.*

Observations on the Etiolgy of Acute Bright's Disease.—Dr. Agnes Bluhm has classified the causes of all cases of Bright's disease occurring in the Medical Clinic at Zurich, during a period of five and one-half years. The infectious diseases are the chief cause of acute Bright's disease, occurring as it does after typhoid fever, acute exanthemata, erysipelas, variola, diphtheria, tonsillar angina, croupous pneumonia, acute peritonitis, and acute miliary tuberculosis. Among the chronic infectious diseases, tuberculosis and syphilis are mentioned; a number of skin-diseases are also included, as eczema, psoriasis, tuberculosis cutis, and erythema nodosum. Among toxic causes three cases are noted following the use of mercury, lead, and thallin. Among the other causes of acute nephritis are mentioned: intestinal diseases, icterus, circulatory affections, pregnancy, leukæmia, and gonorrhœa. In nine per cent. of the cases no etiology could be determined. The causes of the chronic parenchymatous form of nephritis are more uncertain, but it was due in the larger number of cases to malaria, misuse of alcohol, and unhygienic conditions. Among the causes of genuine contracted kidney, syphilis was present in eleven per cent. and arterio-sclerosis in 17.7 per cent. of the cases; misuse of alcohol, and lead were also concerned in the etiology of this form of nephritis. Regarding the development of acute nephritis after acute infectious diseases, it was observed that neither the severity nor the course of the primary affection exerted any special influence on the nephritis.—*Occidental Medical Times.*

So-called Hysterical Ulcers.—The Berlin correspondent of the *Medical Press* says that at a recent meeting of the Berlin Medical Society, Dr. Schimmelbusch showed a single woman, aged twenty-six, the subject of so-called hysterical ulcers caused by herself. The case was interesting as illustrating the difficulties that are sometimes encountered in the way to a diagnosis. The patient was shown at the last Surgical Congress by Dr. Senger with ulceration the size of the palm of the hand situated above the left breast. The ulcer commenced three years before, after injury from a pin, and had gradually been getting larger. Four surgeons had striven in vain, by means of dressings, curetting, and cauterization to procure cicatrization. The disease spread from small blisters around

the margins of the ulcer, one to two ctm. in length, that burst, leaving a secreting surface that gradually ulcerated more deeply. Transplantation had been tried in vain. Constant watching was employed to find out how the ulcers were produced. The patient was taken into hospital that the watch might be more strict. In order to prevent the patient's fingers getting at the wound a plaster-of-Paris dressing was employed, when the wound became smaller, and transplantation of skin was then performed, and in fourteen days these were found to have taken root, and only a few granulation points remained. But these small granulations would not heal; on the contrary, they soon became larger. The enlargement of the ulcerated surface progressed in the way already described. A second transplantation was made with the same result. The dressing encircled the throat and thorax, and appeared undisturbed, so that contact with the patient's hands could be excluded. It was striking, however, that it was more rubbed through in the parts where it was most firmly attached. It was plain that the dressing on the thorax had been rubbed by the patient, or pushed backward and forward. Convinced of this Dr. Schimmelbusch only dressed the wound with gauze, and healing took place in a short time. The patient had not made any confession; she had even rejected the insinuation that the ulcer was self produced with scorn. There was pain in the breast; the abnormal sensation might be the cause of the rubbing. It was interesting that the appearance of blisters with serous contents resembled in some respects some of those looked upon as religious miracles, of which Louise Lateau was a classical example.

The Relief of Spasmodic Retention of Urine.—Excessive irritability is one form of interference of the higher centres; the other form is spasmodic retention. Thus, when a man wishes to pass water, he is anxious, especially if some one else is standing by and waiting, as in a public urinal, to make water in a hurry; the desire to make water quickly prevents him from passing it at all. This form can frequently be relieved by some such plan as that adopted by Boerhaave. He lived before taps were so common as now, and he used to have a screen in his consulting-room behind which was placed a tall footman. When he desired any of his patients to pass water, the footman, at a given signal from him, poured water from a water-bottle into a basin on the floor, so as to imitate the sound of a person passing water, and this at once had the desired effect. If in the out-patients' department you want to get a specimen of water quickly, in order to examine it, the best thing you can do is to turn on a tap, and if that is not sufficient leave the patient to himself and tell him that there is no hurry whatever; as a rule, if there is more than two teaspoonfuls of water in the bladder, you are sure to get it by this plan. Sometimes, also, when there is no water running, if the patient only thinks of the sound of running water, it will make the bladder act. The introduction into the urinals at railway stations of constantly running water has been of great service to many. Some passengers can now empty their bladder at a railway station who could not have done it before, although it does not occur to them that the constant running of water has anything to do with the evacuation of the bladder; it has, however, a great deal to do with it. Washing the hands with cold water is another help, as also the application of a cold wet sponge or hot water to the perineum: and making the patient sit down in a hot sitz-bath will frequently enable him to pass water into the bath when he could not do it otherwise.—*L. Brunton.*

Photography in Cranio-Cerebral Topography.—Dr. Sommer has found photography a more convenient method of determining the relations of the convolutions of the brain to the cranial sutures than the customary methods. After sewing the skull, he fixes the head in the upright position, so as to avoid displacement of the brain after removal of the skull-cap. The head is then photographed, and, after removal of the skull cap, another photograph is taken, either on the same or another plate. In the first case, the two pictures are combined in the negative; in the second, they may be combined in the printing. If the membranes can be removed without tearing the cerebral substance, it is well to do so. The head can be held in the proper position by a screw-clamp.

Septic Hemorrhagic Encephalitis.—According to the Berlin correspondent of the *Medical Press*, Dr. Baginsky has observed two cases of septic hemorrhagic encephalitis with thrombosis occurring in two children of one family, while a third was still under treatment. On November 30th a child, aged six and one-half years, was admitted into hospital with symptoms of a grave febrile disease. Symptoms: Impairment of sensorium, cyanosis, jactitation, rapid breathing, signs of pneumonia, infiltration in various parts of the lungs, convulsions. Death within forty-eight hours. Autopsy: Extensive smooth pneumonia over both lungs, some parts softened and yellow. Trachea a dark red color. The lungs hemorrhagic in places, patches like as of diphtheria on the bronchi, the pharynx and larynx completely free. Bacteriological examination revealed only streptococci. In the meantime the second child, said to have been seized earlier than the other, was brought into hospital in a state of extreme prostration. Loss of consciousness, occasional general convulsions, ptosis, double pneumonia, slight exudations on the pharynx, apparently consisting of streptococci. Speedy death. At the autopsy an older thrombosis of the longitudinal sinus was found, a part of it suppurating. Further thrombosis of all the veins of the convexity of the brain, and in addition a hemorrhagic clot in the frontal lobe of both sides. The third child was admitted that day (December 5th) suffering from the same symptoms. The lung symptoms reminded one of influenza, one of its complications then being, according to Leichtenstein and Fürbinger, hemorrhagic encephalitis.

Ulceration of the Arm Following Vaccination in a Case of Hereditary Syphilis.—At a late meeting of the Pathological Society of London (*The Lancet*) Dr. Wheaton showed a specimen of this kind. The child was born in an infirmary, and was vaccinated when seven days old. It was well nourished at the time of birth, but the mother stated that it had "snuffles" from the first. No result followed vaccination until the seventh day, when large white blisters appeared at the points of inoculation. Seven days later the blisters burst, leaving three deep ulcers in the skin. Simultaneously with the bursting of the blisters similar ones appeared on the abdomen. The ulcers on the arm continued to enlarge and two of them coalesced, so that there were two circular ulcers on the arm, each larger than half a dollar, when the child was admitted into hospital, six weeks after vaccination. On admission there was also a general pemphigoid eruption, with desquamation of the cuticle of the hands and feet, fissures of the mouth, and dark-brown stains on various parts of the body. Mercury was at once given and the ulceration of the arm improved rapidly; when the child died four days later one ulcer had nearly healed and the other had become covered with a thick scab. Dr. Wheaton said that the case was clearly one of phagedenic ulceration, following vaccination, in a child suffering from hereditary disease, and in which the vaccination had hurried on the development of the cutaneous eruptions of hereditary syphilis. In cases where primary inoculation had occurred by vaccination the secondary eruption never appeared in less than nine weeks afterward, whereas in the present case it had developed in fourteen days. The presence of hereditary syphilis was a frequent cause of phagedenic ulceration in infants. Any lesion of the skin, such as vaccination, impetigo, or the separation of the umbilical cord, might be followed by this ulceration; and he had seen it occur on the soft palate, accompanying tonsillitis in a syphilitic infant. It was impossible to avoid vaccinating infants who might appear to be quite

healthy but were the subjects of hereditary syphilis, and the earlier the vaccination was performed the greater the risk, as in the case described.

Actinomycosis of the Spine.—Within the last two or three years a large number of cases of actinomycosis have been placed on record. The spinal column, as the seat of the primary disease, however, is very rare, and the following case is worthy of notice. The patient was a girl, aged sixteen. For a long time the diagnosis remained uncertain, for from the family's clinical history tuberculosis was suspected. The primary symptoms pointed to the spine or posterior portions of the ribs as the seat of disease. It was considered probable that the spine was first attacked and that the morbid process then spread to the ribs and pleura, producing an acute and extensive pleuritis on the left side with a large amount of effusion. The inflammation then extended further up the spine and the pus penetrated between the intercostal muscles and the costal pleura, at first slowly and then more rapidly. At the same time the left lung was gradually invaded. The lung-tissue then commenced to break down and a small abscess formed which finally burst into the bronchi. An examination of the sputum about this time cleared up the diagnosis, for the ray fungus was found and thus once more proved the value of such an examination in cases where the diagnosis is doubtful. Now that the examination of expectorated matters and discharges from the chest is becoming more systematic, cases of this kind will probably become much more numerous. To return to the account of this case: The pus extending on the left side finally penetrated the pericardium, leading to a sharp attack of pericarditis, followed by death. Although careful search was made no metastatic deposits were found in the other organs of the body.—*The Lancet.*

Alumnol.—A substance discovered by Filehne, of Breslau, has been investigated as to its therapeutic action by Dr. Chotzen. It is an aluminal salt which contains about fifteen per cent. silver and five per cent. aluminium. It is a fine white powder, very soluble in water, in glycerine, and in warm alcohol. It is insoluble in ether. Heinz and Leibrecht have already reported on its physiological action, and have shown it to be a harmless, odorless, and antiseptic astringent. The author has used it in more than three hundred cases. It was found curative when applied pure to soft chancres and abscesses mixed in the proportion of ten to twenty per cent.; with inert powders in balanitis, erosions, moist eczemas, etc. One to five per cent. solutions were used in moist and papular eczemas, acne of the face, boils, and urethritis. Two and one-half to ten per cent. solution in alcohol was used for the treatment of eczema, urticaria, sycosis, favus, psoriasis of the head and face; and two and a half, five, ten, and twenty per cent. lanolin ointment for eczema, seborrhœa capitis, psoriasis, and favus. Alumnol varnishes were used in papular and squamous eczemas. It was found that alumnol was efficacious in acute superficial inflammatory affections of the skin, as well as in chronic processes in which the inflammation was deeper, and in parasitic diseases (under which head the author includes erysipelas, favus, lupus, soft chancre, erosions, and gonorrhœa) and in acute and chronic inflammations of the mucous membrane.—*Edinburgh Medical Journal*, January, 1893.

Cerebral Tumor Resulting from Apoplexy.—Dr. J. A. Campbell has reported a case of tumor of the brain, the result of an apoplexy. The patient, long resident at the Carlisle Asylum, had a paralytic seizure with slight loss or power of right side, followed, a few days afterward by a convulsion and increase of paralysis. The arm remained helpless, but the leg shortly regained power. He was reported to have had slight convulsive attacks at night, failed rapidly, and arm and leg dwindled. He became suddenly comatose, and died three months after the first attack. The diagnosis of apoplexy was favored from the suddenness of the initial seizure, the partial recoveries of power which took place in the implicated members, the absence of the train of mental phenomena usually witnessed with growing tumor, and the character of the final and fatal seizure. The post-mortem examination revealed a tumor the size of an orange in the right (?) hemisphere. Dr. Coats examined the microscopic structure of the tumor, and expressed the opinion that it had been a large blood-clot which was undergoing the process of organization. After the blood has coagulated there is first a penetration and replacement of it by round cells and blood vessels. After this the round cells elongate and spindle cells are produced. The process extends from without inward. It is very unusual for a coagulation to undergo this process in the brain, but it is also very unusual for a patient to survive after such a large hemorrhage as this must have been.—*American Journal of Insanity.*

Angeio-Neurotic Œdema.—After a critical study of the literature of this condition, Dr. Collins concludes: 1. That there exists a variety of œdema attended by such striking characteristics of its own, that we are justified in referring its origin to the nervous system. 2. The seat of the manifestation of the lesion is probably in those vessels and lymphatics which pass through the corium to the subdermal tissues. 3. It is probable that although the lesions or the irritants on which the disease is dependent may attack other parts of the system, yet the result directly appears through the sympathetic system. 4. Evidence concerning the bearing of tropic influences in the production of the disease cannot be produced. But when tropic changes do occur they are more plausibly attributed to the changes brought about by the oft-recurring œdema, *per se*, than to influences exerted through the nervous system as true tropho-neuroses. 5. It is quite possible to believe that in the future its causation may be attributed and shown to be dependent upon products manufactured and ordinarily disposed of within the system, but which, acted on by sinister influences, either inherited or acquired, result in the temporary disturbance of the vaso-motor system, which is manifested in various parts of the body, depending, as does the analogous condition of the distribution of blushing and flushing, upon structural peculiarities, either central or peripheral, or upon inherent predilections. 6. This condition has a close relationship to the many œdemas spoken of, and also a family relation with many of the arthropathies as yet not well understood, but known to be directly caused through the agency of the nervous system. 7. It must be admitted, from clinical evidence, that the affection in question has a family relation with other vaso-motor neuroses, such as exophthalmic goitre and urticaria.

Catheterization of the Biliary Ducts.—Terrier and Dally have formulated the following conclusions: 1. In general the catheterization is easier under pathological conditions, especially when the ducts are dilated by a stoppage in the valves or at the distal end of the cystic canal. 2. Nevertheless, in many cases, owing to the curvatures in the canal, the persistence of the valves, or the opening of the duct upon the lateral wall of the sac, the catheterism is difficult. 3. Often the difficulty is insurmountable, often there is none. 4. Rules for the passage of the catheter are impossible, owing to the variations in the anatomical relations. The only way is to attempt the catheterism with a clear idea of the normal relations for a guide. 5. Forced catheterism, even with a finger externally to direct the instrument, is difficult, and in all cases dangerous. 6. The treatment is not well enough understood as yet for its value to be appreciated. 7. The instruments to be used are olive-pointed bougies and Benique's catheters, with or without stylets. Liver catheters are of rare use. 8. In all these operations strict antisepsis must be observed.—*Boston Medical and Surgical Journal*, No. 20, 1892.

More than Five Hundred Thousand Cases of Cholera occurred in Russia during the epidemic of 1892.

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NAMES AND UNIFORMITY.

AT the opening meeting of the London Medical Society, Mr. Jonathan Hutchinson gave an interesting address on "Names, Definitions, and Classifications." The title has a rather scholastic and forbidding sound, but the lecture was a plea for greater clearness, simplicity, and uniformity in the use of the technical terms of medicine.

The speaker touched upon a very fruitful subject for discussion. The number of technical words in medicine is increasing every month, many old words are being dropped, and new meanings attached to old ones. All this makes the science of medicine more difficult to learn, simply because the tools of our study are not well made or well selected. The recent remarkable out-put of medical dictionaries shows how much of a demand there is just to learn the language of medicine.

Mr. Hutchinson illustrates the importance of having clear definitions of medical terms by citing the words "erysipelas," "phagedena," and "diphtheria," and showing how widely the conception of the processes differs according to the writer's personal views or experiences. Of course this only indicates, however, the fact that medical science has not yet crystallized into its final shape; and we can hardly expect clear definitions to come before clear ideas are evolved. On the subject of classification the speaker has not much to say, though here there is opportunity for immediate improvement. It is the custom of some writers to follow a clinical method, and this plan is largely adopted by the English, who apparently like to start up some novelty such as "catheter-fever," "paroxysmal hurry," "anchored brain," or similar catch-words upon which to attach a train of symptoms. The French are even greater sinners in this respect, though it is their especial weakness to give a supposed discoverer's name to some odd symptom-complex.

It is generally admitted that the true basis for a permanent and scientific classification of disease must be pathological anatomy and pathology. With this foundation clinical terms may be used to form an expressive and useful nosology. The use of a physician's name to indicate a disease is a practice much employed in the past, and still adhered to by the French, as we have stated, but it is not a good plan and it ought to be followed no longer. The practice was criticised many years ago by Dr. Oliver Wendell Holmes, who said: "If a doctor has the luck to find out a new malady, it is tied to his name like a tin-kettle to a dog's tail: and he goes clattering down the highway of fame to posterity, with his æolo-attachment following at his heels." This is hardly just to the memories of such men as Bright and Graves, Friedreich, Pott, Ludwig, and Sydenham; yet it expresses on the whole the truth of the matter. Mr. Hutchinson suggests that one should call a new disease by the name of the patient who was first found to have it. He himself has described "Penman's Prurigo" and "Mrs. Branford's Legs." Mr. Hutchinson is evidently, however, indulging in some obscure form of British humor, against which Mrs. Branford should in particular protest.

The speaker advocates the finding of new diseases, however, and thinks that the more the merrier, or, at least, the better for clinical science. Observers should sift out symptoms and get as many "types" as possible. This plan we can commend for a young science, and medicine is still young. Later the types should be harmonized and put together.

After all, questions of definitions, manner, and classifications, are things which cannot be dealt with satisfactorily by individuals. To the great medical organizations belongs the task of unifying and simplifying the terms in use. In course of time it is to be hoped that some international committee will undertake the work of bringing to pass our nosological ideals.

STAMPING OUT CHOLERA.

DR. I. TELYAFUS, of Tiflis, Russia, has recently published a *brochure* embodying his views as to the most efficient means of strangling cholera in its Indian home, and of thus freeing Europe and America from the constant menace of its periodical excursions. The habitat of the cholera bacillus is, he says, the delta of the Ganges, a low-lying area of some 7,500 square miles, intersected by the many mouths of the Ganges and Brahmapootra Rivers. The soil of the delta is very moist, and contains the putrefying remains of many forms of animal and plant life. Cholera has raged here endemically from time immemorial, and every now and then, after unusually heavy rains, or from other ill-understood causes, it emerges thence and invades one or more of the neighboring provinces, or spreads as a pandemic over the entire world. There have been four such general invasions, and we are now passing through the fifth.

Proust, in his work on hygiene, regards as Utopian any attempt to exterminate the germs of cholera in India, but with this pessimistic view Dr. Telyafus takes exception. He says that the plague has been stamped out in the Nile delta, and he thinks that similar or more energetic measures would be equally effectual on the banks of the Ganges. Formerly the fellaheen of Egypt interred their dead on the borders of the river Nile, and the bodies were then washed out into the stream during the annual overflow of the river, and were carried down to spread disease throughout the delta. Since an end has been put to this custom, the plague no longer harasses the country.

It would doubtless be difficult, if not impossible, to restrain the natives of India, inhabiting the region of the Ganges, from casting their dead into the waters of the sacred stream; but the author thinks this difficulty might be obviated by compelling the people to cremate their

dead and then throw the ashes on to the bosom of the river. He would also endeavor to improve the sanitary condition of the delta by planting extensive eucalyptus groves, as has been done on a large scale in Algiers. In the latter country there were, a comparatively few years ago, large areas of almost uninhabitable marshes which are now settled and extensively cultivated by a numerous and industrious population. The change has been effected by drainage and the planting of eucalyptus trees. The same measures, the author believes, would result in transforming the delta of the Ganges into a salubrious and rich agricultural section. The expense of such works would, of course, be enormous, but this would no doubt be covered to a great extent by a vastly increased production, and would be more than compensated for by the saving of thousands of valuable lives, in this region alone, every year.

THE INFLUENZA IN NEW SOUTH WALES.

A VALUABLE and suggestive contribution to the literature of influenza is the "Report on the Epidemic of Influenza in New South Wales," presented to the President of the Board of Health by the chief medical inspector, Dr. J. Ashburton Thompson, of Sydney. The report is based upon a series of collective investigations into the epidemics of 1890 and 1891. Thanks to the promptness with which the investigation was undertaken, the facts being collected while they were still fresh in the minds of those under whose observation they had come, and also to the situation of the country, cut off as it is by the sea from the rest of the world, the conditions were peculiarly favorable for a study of the mode of origin and spread of the disease.

It is true no new facts were discovered, at least no facts which were not simultaneously noted by others during the same pandemic elsewhere, but what was learned was confirmatory of the conclusions arrived at by students of the disease in other parts of the world. In the first place, the ancient belief that influenza is propagated through the air, and that its spread is directly dependent upon certain atmospheric influences, was thoroughly disproved, and the fact that it is a communicable disease, spreading from the sick to the well, was definitely established. In a number of instances it was shown that the first case in a given community was imported, either by a stranger or by a native who had visited other districts where influenza was prevalent. And from this single case as a centre the infection attacked the other members of the family and the visiting neighbors until the epidemic became fully established in that particular locality.

It was not possible to determine the exact number of persons attacked by the disease, but an approximation was arrived at. The number of reporters was 148, and they attended about 32,500 cases. As 148 was rather more than one-fourth of the total number of practitioners in the country, it was estimated that from 100,000 to 130,000 in all were ill enough to seek medical advice. This was approximately one eleventh of the total population, but of course many times more people suffered from the disease in so mild a form that they did not need to consult a physician. In other countries it has been estimated that from one-fourth to one-third of the entire population was attacked, and this was, in fact, about the proportion of those who suffered in a small mining town where it was possible to observe and record every case, mild or severe.

The period of incubation was found to be, in the few cases in which this could be definitely determined, from thirty to forty-eight hours, which agrees substantially with observations elsewhere that have fixed the period at two days. Many persons were found who suffered from the disease more than once, so it would seem that one attack does not confer any protection against subsequent ones. Liability to attack seems also not to have been affected by age, sex, occupation, or environment.

The medium of infection appears to have been through the secretions from the mucous membranes, and Dr. Thompson believes that these secretions must be specifically infectious from the earliest moment, even before the actual symptoms of the disease have appeared. If the infection does occur through this means, it follows, Dr. Thompson says, that mere exposure in the presence of a sick person would not be sufficient, since micro-organisms do not leave liquids for the atmosphere, even during evaporation, but are transported only in these liquids.

This transportation may occur during coughing and also when the patient speaks. "Larger and smaller particles of saliva are then projected into the atmosphere, of which some are weighty enough to fall upon the nearest object, while others are minute enough to float upon the air to some moderate distance. In this way the confined air of a sleeping-room, work-room, or railway carriage might sometimes, and to that limited extent, become an efficient carrier of the contagium; and the evidence in general weighs against there being any more diffuse or subtle infection of the air than that." It follows from this that the best means of protection is isolation of the sick. But as this is manifestly impossible on a public scale, the only resource is, "to make the essentially contagious character of influenza as widely known as possible in order to encourage the practice of such domestic isolation as ordinary dwelling-houses may permit; and in order that [the sick] may understand that they are as much under a moral obligation not to spread the disease as they are to avoid injuring their neighbors in any other way."

AN EXPERIMENT IN CASTRATION.

AN interesting experiment has suddenly come to grief at the Norristown Insane Asylum, Pa. Some of the medical staff became much impressed with the value of castrating women as a therapeutic measure in insanity. The consent of the trustees being secured a surgical ward was established, and fifty patients selected as being cases likely to be benefited by the operation. The process of oöphorectomy was begun, and went on swimmingly until the fifth case was reached. The fifth patient died, and a pause in the surgical work ensued. The Lunacy Committee of the State Board of Charities took up the matter, an investigation was begun and a report made. This report condemns the operation of oöphorectomy, except in cases of gross disease which absolutely demand extirpation. The subject of the personal rights of the insane in the matter was dealt with by a legal member of the Committee, who offered this official opinion:

"I am of opinion that the operation of oöphorectomy

upon insane women, as recently practised and as proposed to be practised in one of our State hospitals for the insane, unless necessary to save life, is not only illegal, but, in view of its experimental character, it is brutal and inhuman, and not excusable on any reasonable ground. To quote a learned medical opinion: 'To operate on organs not diseased for the relief of undefinable symptoms, hysterical symptoms, and epileptic symptoms, is unwarranted.' A lunatic cannot give a legal consent to the performance of an experimental operation. Nor can her relatives legally give such a consent in her behalf, and therefore a surgeon practising oöphorectomy upon an insane woman, unless to save life, takes a great risk. He may take the risk of a criminal prosecution.

"It is regarded by the best medical authorities as a useless and improper expedient for the cure or relief of insanity, and the operation of oöphorectomy in a public hospital upon indigent insane women must be regarded as largely experimental, and for that reason is bound to reflect upon hospital authorities now boasting of modern humane methods."

THE COMPLETION OF A GREAT WORK.

The Governor of New York has signed the bill levying a tax to carry out the new law providing for the State care of the insane. This completes the legislation necessary to the perfect accomplishment of a reform which has long been desired and assiduously worked for. As the Governor well says, the bill marks an epoch in an important matter of State policy. "The so-called State Care act of 1890 provided that when accommodations in State hospitals should be provided for all of the insane poor, the cost of clothing, maintenance, care, treatment, salaries of officers and employees, and transportation of the insane should cease to be a charge upon the counties of the State, and should become a direct charge upon its revenues, from funds to be specifically raised for that purpose. In December last the certificate required by law was made that accommodations would be in readiness by October 1, 1893. And this bill provides the necessary tax and appropriation for carrying the State Care act into effect."

The tax imposed will raise an annual income of $1,350,000. Kings County and New York County alone will not be benefited financially by it, however, nor do its citizens come under the provisions of the original act.

As matters now stand these counties not only pay for their own insane, but help pay for those of other counties. The result is that New York pays an extra tax of $596,288, and Kings County one of $154,046.

Regulation of Medical Practice in Ohio.—The great State of Ohio has at last awakened to the necessity for some regulation of the practice of medicine. Her legislators feel that ignorant men and women should not be allowed to practise upon unsuspecting victims; they have therefore passed a law requiring an examination before allowing doctors to practise—*upon horses*. This law was passed by the same branch of the Legislature which refused to give a decent hearing to a bill to regulate the practice of medicine among human beings.—*Lancet-Clinic*.

News of the Week.

The Medical Association of Georgia will hold its forty-fourth annual session, in Americus, on April 19, 20, and 21, 1893. The President of the Association is Dr. A. A. Smith, of Hawkinsville, and the Secretary, Dr. Dan. H. Howell, of Atlanta. The preliminary programme, which has just been published, gives the promise of an interesting and instructive meeting. We trust, however, that a more careful proof-reader will have charge of the volume of the "Transactions" than has had to do with the programme.

American Academy of Medicine.—The annual meeting of the Academy will be held in Milwaukee, June 3 and 5, 1893. The following papers will be read: "The Attitude of our Medical Schools in Relation to Preliminary Studies," by R. Lowry Sibbet, M.D., Carlisle, Pa. "What Mental Faculties should be Specially Trained for the Study of Medicine?" by James W. Moore, M.D., Lafayette College. "The Classics and the Common Schools," by J. Berrien Lindsley, M.D., Nashville, Tenn. "What should be Required in an Entrance Examination to a Medical School?" by James W. Holland, M.D., Jefferson Medical School. "Should there be Elective Studies in a Medical Course?" by P. S. Conner, M.D., Medical Department, Dartmouth College. "On the Endowment of Medical Schools," by George M. Gould, M.D., Philadelphia. "The Duty of the State to Medicine," by Benjamin Lee, M.D., Philadelphia. "The Importance of the Study of Medical Sociology," by Charles McIntire, M.D., Easton, Pa. A paper—title to be announced later—by C. C. Bombaugh, M.D., Baltimore, Md.

Dr. Charles E. Naammack has been appointed Visiting Physician to Gouverneur Hospital, to fill the vacancy caused by the death of Dr. Laurence Johnson.

A State Ice Commission.—A bill prepared by Dr. T. Mitchell Prudden, Director of the Physiological and Pathological Laboratory of the College of Physicians and Surgeons, has been introduced into the Assembly. It provides for the creation of a State Ice Commission, to consist of three persons, at an annual salary of $3,000, but limiting the expenses of the Commission to $40,000 a year. The bill makes it a misdemeanor for any one to cut or sell any unclean, impure, or unhealthy ice, and specially prescribes that no ice shall be cut within five hundred feet from the outlet of any sewer or drain-pipe, or within five hundred feet of any stable or manure dump; it being the duty of the Commissioners to see that the law is properly enforced.

Glazed Paper in Books.—A correspondent wishes to enter a protest against the present custom of printing books upon highly glazed paper. The reflection from this paper is unpleasant to the eyes, especially when one is reading by artificial light, and the writer thinks it must be injurious and surely is useless. If it is useless, let the glare be removed.

Baltimore has a dispensary conducted by women physicians exclusively. It has evening classes.

Dr. Joseph Collins has been appointed Visiting Physician to the Hospital for Nervous Diseases, in the place made vacant by the death of Dr. F. H. Ingram.

Report of the Committee on the Protection of the Water-Supply of New York City.—The Committee of the Academy of Medicine, appointed at the special meeting of that body on March 9, 1893, presented an elaborate report to the Academy on Thursday last, together with a large number of papers, including copies of the various bills, amendments, and statutes bearing upon the subject of water protection. The report states that the Committee were appointed at a special meeting and instructed to present the views of the Academy to the Legislature.

"What the city needs (in the opinion of the Committee) is, first, a consistent plan, approved by sanitary experts, for the safe disposal of town and village sewage on the watershed, and legal and financial power to carry such a plan into effect. Second, such legislation as shall forbid, under compelling penalties, individual pollution of the water, and honest and efficient enforcement of that legislation. Third, the city needs the power and means to acquire (under proper safeguards of individual rights) such real estate as may, in the minds of competent sanitary experts and engineers, be necessary to protect the water, after the sewage problem shall have been, so far as possible, solved by the more simple and effective measures which science has made known."

The Committee presented these views in the form of amendments to the "Webster bill," at that time under consideration by the Senate Committee on Cities in Albany. Not the least attention was given to the Academy's representatives, save a formal hearing by the Senate Committee, when the chairman of that Committee, as appears from the stenographic report presented to the Academy, seems to have acted much the same part as a lawyer engaged to oppose the Academy's suggestions might have done. The Senate Committee reported the original bill favorably, making no pretence of paying the least attention to the Academy, and the Senate promptly passed the measure the next day. The Academy Committee at once telegraphed to the Governor, asking to be heard by him before the bill should be enacted by receiving his signature. The Governor granted the request, and, after consideration signed the bill, filing at the same time a memorandum which directed attention to the faults mentioned by the Committee, and urged the necessity for legislation which should be unquestionably sufficient in the premises. The Committee immediately after learning that the bill had been signed, sent to Albany a bill, which was introduced upon the same day into both Senate and Assembly by Senator Saxton and Assemblyman Kempner respectively. The bill was in accord with the Committee's instructions. With it were forwarded alternative amendments, which, though the Committee did not approve, might be accepted in case of emergency. At a conference with the Mayor, these amendments were accepted by the latter, and introduced at the request of the Corporation Council. The Academy bill was not withdrawn, however. At the time the report was presented the situation was unchanged. The following is an abstract of the "Webster bill" and the changes recommended by the Academy:

Abstract of the Bill as Presented to the Senate Committee on the Affairs of Cities.—SECTION 1 makes it lawful for the Commissioner of Public Works of the City of New York, acting for and in behalf of the City, to acquire or take, in the manner subsequently specified in the act, title to, or to acquire or extinguish any interest in, any real estate in the Counties of Westchester, Putnam, or Dutchess, which may be necessary for sanitary protection of the water-supply.

SEC. 2 defines the terms "real estate" and "interest" therein as used in the act.

SEC. 3 directs the Commissioner "from time to time, and as often as he deems necessary, and within three years after the passage of this act," to cause maps and statements to be prepared indicating the water-courses, etc., and the property of which the "use or condition does or may injuriously affect the sources of water-supply," and specifying what real estate or interest it is proposed to acquire, take, or extinguish. Both maps and statements may be modified, when necessary. Notice must be given and hearings allowed to all persons interested, before the maps and statements are finally certified and approved. The Commissioner to administer oaths and issue subpœnas in any proceedings pending.

SEC. 4 gives authority to enter upon any land or water for the purpose of making examinations, surveys, etc.

SEC. 5 specifies the details to be shown on the maps. It also directs that a certain number of copies of maps and statements shall be prepared and distributed in a certain way.

SEC. 6 to 25, inclusive, prescribe the manner of acquiring and making compensation for the property condemned.

SEC. 26 authorizes the Commissioner to cause surveys and maps to be prepared without contract, and to employ such persons as may be needed to carry out the provisions of the act, and to fix the compensation for their services, and to make without contract any alterations required for sanitary reasons, in any property acquired, and to appoint and fix compensation of any persons needed to maintain in good condition any property.

SEC. 28. The Commissioner "is hereby authorized to take such measures as may be necessary to preserve from pollution and defilement all the sources of water-supply" . . . . "and to that end to enter in and upon, at any time within three years after the passage of this act, any or all lands, near, on, adjacent to, or contiguous to, any of the said sources of water-supply, and to abate and remove the cause of any such pollution or defilement." The section then sets forth the manner of determining and making compensation for damages resulting.

SECS. 28, 29, and 30 authorize the issue of bonds in order to obtain the necessary money, limit the amount to be expended to $350,000 per annum for three years, direct the Commissioner to make monthly reports of moneys spent and liabilities incurred, and direct the Comptroller to pay the sums required, proper precautions being taken to avoid fraud.

SEC. 31 reaffirms certain limitations already existing as to the use of the waters of Lakes Mahopac and Gleneida. It will be seen that this act gives enormous power to a single man—a part of which power is legislative; that it does not give power to make and enforce sanitary regulations; that it does not require the adoption of a plan for sewage disposal devised or approved by sanitary experts and engineers; that, although it gives authority to abate nuisances, it does not forbid the creation of nuisances, except the City buys the land upon which they may be established.

A Snake Laboratory has been established in Calcutta. It has nothing to do with inebriety or Keeley cures, but is intended for the study of snake bites and their antidotes.

The Succus Entericus.—A patient in Guy's Hospital, with an intestinal fistula near the ileo cæcal valve, has furnished to Drs. H. Turby and T. D. Manning an opportunity to study this secretion; they found that it had no action on albumin, that it emulsified and saponified fats, and turned starch into sugar. The function of the juice seems to be to complete the action of the saliva and pancreatic juice.

A Medical Bicycling Club.—Cycling has taken a firm hold on many members of the medical profession, young and old, and the *Brooklyn Medical Journal* suggests the formation of a Medical Cycling Club.

The Use of Benzosol in Diabetes Mellitus.—Benzosol or benzoyl-guaiacol, which has been introduced by Dr. Bougarts as a substitute for creosote and guaiacol, has recently been recommended as a very useful remedy in diabetes mellitus by Dr. Piatkowsky, of Cracow. It is administered in doses of one to three grammes per diem. According to a recent communication, at a meeting of the physicians at Prague, by Professor Jaksch, the sugar disappeared from the urine after the administration of benzosol for eight days in the case of a female patient aged fifty-six, who had 5.7 per cent. of sugar, but the patient died in consequence of a toxic enteritis with grave jaundice, which was attributed to the use of the remedy. On the other hand, it has been pointed out by a Vienna chemist that caution must be exercised with regard to the polarimetric examination of the urine in cases where benzosol has been administered, as the urine of persons who have taken this drug polarizes to the left, and therefore the polarimetric examinations of the urine of such persons, when it contains sugar, are misleading.—*The Lancet.*

The City of Berlin intends to build a fourth hospital, but the project is still in a very preliminary stage.

Jubilees of Doctors.—Within the last few weeks no fewer than six medical men in Germany have celebrated the fiftieth year of their doctorate. The first is Du Bois-Reymond, then follow Professor Jolles, August Hirsch, the epidemiologist, Professor Henoch, Dr. Langerhans, Drs. Neumann and Geh. Sanitätsrath, Dr. Reich.

The Physicians of Rutland, Vt., are said to have got together and agreed to raise the price of their calls from $1 to $2.

A Blow at Patent Medicines.—Two bills have been introduced in the New York Assembly by Mr. J. H Southworth, of the thirteenth district in this city, which are intended to regulate and restrict the sale of patent medicines. The first of these bills is an act to confer upon the State Board of Health the power to analyze such compounds. It authorizes and requires the Board, upon receiving a fee of $50 for such service, to cause an examination and analysis to be made by a practical chemist of any drug, medicine, or mixture of drugs, herbs, or medicines commonly known as patent or proprietary medicines. The second bill is in the form of an amendment to section 497 of the Penal Code, and makes it a misdemeanor to offer for sale or sell any patent or proprietary medicine, not prescribed by a regular physician, without the examination and written approval of the State Board of Health.

The Public Press and the Grady Hospital, Atlanta, Ga.—It seems that too many of the wonderful operations done at the Grady Hospital get into the daily press. It is stated (*Southern Medical Record*) that the following resolution has been recommended for adoption:

"*Resolved*, That no officer or employee of the Grady Hospital shall give any information to the newspapers regarding the condition of patients, or the treatment of the same, or of any surgical operation performed by any surgeon in attendance at the hospital."

Medical College Commencements.—The fourteenth annual commencement of the Southern Medical College was held on March 2d, 37 being graduated. The sixty-first annual commencement of the Medical Department of the University of Georgia was held recently, 32 being graduated. The thirty-fifth annual commencement of the Atlanta Medical College was held recently, the graduating class numbering 74. The forty-ninth annual commencement of the Medical Department of the Western Reserve University was held at Cleveland, on March 1st.

Dr. Charles Pratt Strong, a prominent surgeon of Boston, died in that city of septicæmia, on March 14th, aged thirty-eight years.

The Opening of a Fashionable Hotel in this city was made the occasion of giving a concert which netted $7,000 for St. Mary's Hospital.

New York Eye and Ear Infirmary Reports.—This is the title of a volume of carefully prepared articles written by the staff of the Infirmary. They make a creditable volume, but we must deplore again the growing tendency for every hospital, college, and medical society to have its organ. It makes medical literature inaccessible.

The Arizona Medical Association met in its regular annual session February 27th, and remained in session three days. The following officers were elected for the ensuing year: *President*, Dr. H. A. Hughes; *First Vice-President*, Dr. R. C. Dryden; *Second Vice-President*, Dr. C. H. Jones; *Third Vice-President*, Dr. A. H. Hoeffer; *Secretary*, Dr. L. D. Dameron; *Treasurer*, Dr. W. T. Barry. The Association is only a year old, yet the meeting was marked with interest, much good being accomplished.

Dr. Ceccarelli, physician to the Pope, is dead. He was physician to the late Pius IX. It is related that when the ill-health of the Pope confined him to his bed, Dr. Ceccarelli took up his residence in a small room situated just above that of his patient, in order to be available at any hour of the night or day. The etiquette of the Pontifical Court forbids the entrance of the physician into the bedchamber except in court dress, but kind old Pius IX. insisted on his wearing a specially devised uniform, warmly lined, in order to minimize the exposure of nocturnal calls. Dr. Ceccarelli's successor is Dr. Lapponi, of Pérouse, he having been the physician of Leo XIII. when Archbishop of that diocese.

Dr. Miles has succeeded the late Dr. Samuel Logan as Professor of Surgery in Tulane University.

Mr. Gladstone on Medical Fees.—There seems to be no end to Mr. Gladstone's feats. He has favored the public with another great speech—that on bimetallism, in the course of which he remarked that many things had risen in value in late years. Oddly enough, among the few things he instanced was the remuneration of medical men. "No one is aware of the increase of fees in the medical profession, and I am bound to say that there are none more nobly earned in the world."

Reviews and Notices of Books.

The Mütter Lectures on Surgical Pathology. Delivered before the College of Physicians of Philadelphia, 1890–91. By Roswell Park, A.M., M.D. St. Louis: J. H. Chambers & Co.

These lectures have already been noticed in our columns. Their collection in book-form makes them accessible to all, and forms a most valuable addition to surgical and pathological literature. The greatest surgeons have usually been good pathologists; and all surgeons need to be well versed in this branch of our science.

Jahresberichte über die Fortschritte der Anatomie und Physiologie, Herausgegeben von Dr. L. Hermann und Dr. G. Schwalbe, Zwanzigster Band Literatur, 1891. I. Abtheilung Anatomie und Entwickelungsgeschichte. Leipzig: Verlag von F. C. W. Vogel. 1892.

We take pleasure in acknowledging the receipt of these valuable volumes.

On the Simulation of Hysteria by Organic Disease of the Nervous System. By Thomas Buzzard, M.D. Lond. Pp. 113. London: J. & A. Churchill. 1891.

In these days when it is so often the custom to label any neurosis which is bizzare or mysterious with the name hysteria, Dr. Buzzard's contribution is timely and useful. He shows that it is quite possible for organic diseases of the nervous centres, particularly those of a degenerative kind, to produce clinical pictures like that of hysteria.

Clinique des Maladies du Système Nerveux, M. le Professeur Charcot: Leçons, Mémoires, Notes et Observations, parus pendant les années 1889–90 et 1890–91, et publiés sous la direction de Georges Guinon, Chef de Clinique. Tome I. 8vo, pp. 464. Paris: Aux Bureaux du Progres Medical, Veuve Bebé & Cie. 1892.

The present volume represents the work done at Charcot's clinic in 1889–90 and 1890–1891. The lectures and notes are of varying merit and the whole book might be greatly condensed with advantage. The more important articles are those on hysteria, syringomyelia, and Morvan's disease; others on sciatica, hemiplegia, and muscular atrophies are of interest but tell little that is new.

A Text-Book of Morbid Histology for Students and Practitioners. By Robert Boyce, M.B., M.R.C.S. New York: D. Appleton & Co. 1892.

This book offers a useful addition to the existing works on histology. It is written in such a lucid style that no one can fail to obtain the information he seeks by a careful perusal of its pages. There are many colored illustrations, clear and well executed, which add not a little to the value of the work as a text-book. The chapters on the infectious processes, on tumors, cysts, and the inhalation experiments are deserving of special mention.

Anatomy, a Manual for Students and Practitioners. By Fred J. Brockway M.D., and A. O'Malley, M.D. Philadelphia: Lea Brothers & Co. 1892.

This neat volume is one of the Student's Quiz Series, edited by Dr. Bern. Gallaudet. It is, like the others of the series, written in the form of questions and answers, which seems to be thought the best method for impressing knowledge quickly upon the mind of the student.

A Primer of the Art of Massage. By Dr. Stretch Dowse. Bristol: John Wright & Co.

Beginners in the study of massage will find in this little book much that will instruct them, and those who have long since begun will be interested if they are still, as they should be, "learners." Thirty pages are devoted to the Weir-Mitchell treatment.

Epidemic Skin Disease. By Thomas D. Savill, M.D. Lond., D.P.H. Camb. Pp. 64. London: H. K. Lewis. 1892.

This is the elaborated paper which the author read before the London Medical Society last year, describing a peculiar and apparently new skin disease which occurred in epidemic form in several of the London workhouse hospitals. The epidemic received editorial comment at the time in the Record.

The volume presents a very neat appearance in its Christmas-like coat of artificial vellum, and contains, besides a chromolithograph, several good photo-types.

A Treatise on Nervous and Mental Diseases. By Dr. Landon Carter Gray. Philadelphia: Lea Brothers & Co.

Dr. Gray wields a facile pen. The book before us, he tells us, is an endeavor to put a working knowledge of the nervous system and mental diseases into the hands of students and practitioners. It can be said with confidence that he has succeeded in doing this. The general scope of the book is included under three parts. Part I. includes a chapter on the structure of the nervous system and one on electricity; both these subjects have often made the subject-matter for entire volumes, but in the 117 pages before us the author has undoubtedly found that there is a sufficient amount of information to satisfy the appetite of erudition in the ordinary disciple and follower of Esculapius. The value of the first chapter would have been enhanced by a few pages devoted to the development and morphology of the nervous system.

Students make more rapid progress and get a more satisfactory knowledge of the completed structures of this very complex portion of the human anatomy when they have either a knowledge of the genesis of the nervous system or of its structure in the lower animals. The illustrations in this part of the volume are quite satisfactory. The author emphasizes the point that most readers of books have become conversant with the appearance of the brain and its convolutions only through diagrams. Scarcely will this statement be doubted, but on the other hand there will be some difficulty in convincing authors and teachers that such diagrammatic representations are not more serviceable than an absolute delineation of one or two brains. Convolutions and fissuration of the brain differ as much in different brains as do the faces of different people whom we meet in a crowd. Therefore the appearances presented by one brain cannot be taken to represent the averaged appearance of a large number of brains with the same amount of assurance that a diagram based on an extensive examination of brains can.

Taken as a whole, the first chapter fulfils its purpose admirably, and the same can be said of the second chapter, which is really replete with important and useful knowledge.

Part II. of the book is included under twenty-two chapters and is concerned with a description of the vari

ous nervous diseases. No attempt has been made to classify these diseases by any hard and fast lines, but they are considered in a sort of a natural way, beginning with the diseases of the structures within the cranium and then proceeding to the cord and peripheral nerves, etc. The first chapter concerning cerebral localization is an excellent one, and contains the most recent acquisitions to our knowledge, told in a remarkably lucid manner.

Of course it is not possible to take up in review all the diseases spoken of, but we will confine our criticisms to a few. Acute or general acute diffuse myelitis is defined as a diffuse or transverse inflammation, softening or sclerosis of the spinal cord. This definition can scarcely be considered satisfactory in the light of advanced pathology of the present day. The occurrence of acute myelitis is among the rarest seen by the physician. Many writers, such as Oppenheim, tell us that during their entire professional experience they have seen but a very few cases in which the diagnosis could be made with any degree of confidence. When it does occur its most common cause is septic infection, a point on which Dr. Gray does not lay sufficient stress. For instance, gonorrhœa as a causative factor is not mentioned, although there are several indubitable cases of acute myelitis on record, directly traceable to this cause.

Friedreich's ataxia is not included under the spinal cord diseases, although the results of autopsies in this disease have shown the principal lesion to be a degeneration of the posterior columns with later involvement of the anterior and lateral columns with change in the posterior cornua. Menzel's case, however, is given in detail as regards pathological findings, and based on this the author sees fit to describe it under another caption than a spinal cord disease.

Under diseases of unknown pathology are given hemiatrophy of the face, astasia-abasia, and paralysis agitans. He says, truthfully, that the pathology of this last disease is a very dark chapter, but probably there will be found a great many who would not care to believe with him that in the ordinary case there has been nothing absolutely found after death. We recall cases recorded by Borgherini, Cayley, Joffroy, Luys, Demaage, Tessier, and others in which extensive post-mortem changes have been found and bearing directly on the disease.

Every author must excel in some particular part. Dr. Gray is at his best in the discussion of the so-called functional and reflex diseases. His chapters on railway injuries, neurasthenia, somnambulism, etc., are, to say the least, excellent. In his therapeutics, likewise, his instructions are minute and carefully given, and his materia medica has been selected with a most careful and judicious hand. In this respect, as well as in many others, the book will have a great field of usefulness. The author probably knows, from his long experience as a teacher of physicians who return every year to the city to furbish up a little, after several years' practice of their profession, that what such physicians want is to be taught how they can go back to their respective fields of usefulness and clear up some obscure case that has been puzzling them. When they are taught this they feel well repaid for coming. In equal importance with this they desire to become more skilled in diagnosis. For practical physicians, the class for which this book was written, Professor Gray's work has not been excelled. With a broad and discriminating hand his book shows that he has weeded out the unnecessaries, the artificial, and the fanciful, while with theories he has scarcely concerned himself. Such a course is necessary in order to compress a working knowledge of nervous and mental diseases within a space of less than 700 pages.

Part III. of the volume is taken up with a consideration of mental diseases, and no part of the work reflects greater credit upon the author than these chapters. His clinical pictures are clearly and carefully drawn, the significant importance of the symptoms is tersely stated, and the management and treatment of the insane is looked at from the point of view of the alienist and physician, and not from the standpoint of an asylum superintendent.

Finally, from a close and critical examination of the book, it can be said, justly, that it fulfils the purposes which the author had in its preparation, furnishing a working knowledge to students and practitioners. The dress of the book, the typography, the paper, the text, are in fact all excellent.

Transactions of the State Medical Society of Wisconsin. Pp. 426. Madison: Tracy, Gibbs & Co. 1892.

Thirty-four papers, several of them illustrated, and covering a wide range of subjects, form the body of this volume. Appendicitis receives especial attention.

A Text-book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica, Jefferson Medical College, Philadelphia. Third Edition. 8vo. pp. 696. Philadelphia: Lea Brothers & Co. 1892.

The third edition of this work considerably enlarged by the addition of important material bearing upon the results recently obtained of the use of many of the new and fashionable drugs. Another important addition is a list of drugs arranged according to the physiological action and a list of definitions of the terms used to designate classes of drugs. The work, as a whole, is thoroughly practical, is well arranged, concise in style, and yet comprehensive in all necessary detail.

Faith Healing, Christian Science, and Kindred Phenomena. By J. M. Buckley, LL.D. New York: The Century Co. 1892.

Readers of the *Century* will doubtless recall the interesting articles from the pen of Dr. Buckley, which appeared in that magazine some years ago, wherein the author exposed at length, and as was thought by some, too seriously, the foolish pretensions of Christian Science and other similar *fin-de-siècle* absurdities. Such readers will be glad to learn that these articles have now been brought together, with the addition of new matter, into one volume. The several chapters deal with faith-healing, dreams, presentiments and visions, witchcraft, and Christian science and the mind cure. The author does not attempt to deny all the facts upon which these delusions are founded, and which have served to silence and convert so many apparently healed sceptics, but meets them squarely with simple explanations which must appeal to the common-sense of everyone whose reasoning faculties have not been clouded beyond all hope by the sophisms of the disciples of these new cults. As he himself says, there is little hope that the reasoning here presented will be able to free those already entangled, but it may be of service in preventing others from falling into the same snare. The book is, however, likely to do more than the author intended or desired that it should, for many of the arguments presented against the reality of witchcraft and the genuineness of modern miracles can be made to apply with almost equal force against many of the fundamental beliefs of Christianity. The author seems, indeed, to have realized this, for he is at pains in many places to disclaim any such extension of his arguments, asserting that "the credibility of the record concerning Christ's works is a question which cannot be raised by Christians, whether they hold the superstition of the faith-healers or not." But for others who are not Christians this falling back upon the credibility of the Scripture records is insufficient, and they will be led to apply the same reasoning to phenomena occurring nineteen hundred years ago as to those only two centuries back, or to contemporary happenings. And they will be likely to hold with John Wesley, who wrote in 1768, that "the giving up of witchcraft is in effect giving up the Bible."

Society Reports.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, March 3, 1893.

CHARLES L. DANA, M.D., PRESIDENT, IN THE CHAIR.

Sarcoma of the Tongue; Operations; Final Recovery.—DR. CHARLES MCBURNEY presented a man, thirty-six years of age, who had come under his care on December 10, 1890, giving a very clear history of progressively increasing disturbance in the throat. He said that four or five different operations had been performed upon him, intra-buccal, and Dr. McBurney heard afterward from the specialist in diseases of the throat who had performed the operations that they were for recurring tumors at the base of the tongue, the galvano-cautery wire having been used. The recurrences had been rapid, all the operations having been done within six months. When Dr. McBurney first saw the patient he was hardly able to swallow, had a good deal of pain and discomfort. The tumor could be easily felt and seen, occupying the back part of the right half of the tongue, looking like a large papilloma in the mirror, over two inches by an inch. A small portion of the tumor was removed by the forceps, and on examination was shown to be sarcomatous. A radical operation was undertaken, now two years and three months ago, after preliminary tracheotomy. Kocher's incision was made for removal of the tongue, down the side of the neck, a little inside the line of the digastric muscle, the flap turned up, the vessels tied, the mouth entered alongside and beneath the jaw. He had found this a very good way to get at the tongue. This organ was then pulled out of the wound and divided from the apex down to the hyoid bone, then crosswise just above the hyoid bone, removing the right or affected half. Half of the epiglottis, considerable of the right pharyngeal wall and the right tonsil were taken away at the same time. No especial difficulties attended the operation, the wound was almost entirely closed, and the patient made a rapid recovery. At the end of a month he was able to swallow perfectly and passed from under his care, but returned soon because of recurrence of trouble with deglutition, and on examination glandular swelling was found in the submaxillary region of the same side. This, within three months from the time of the first operation had reached the size of a small hen's egg. Nearly all the soft parts in the submaxillary region were then taken away, including the enlarged glands, a large triangle of skin, and exposing the wall of the pharynx. A deep excavation was left which evidently could not soon heal, and therefore he covered it at once with skin-grafts. Good recovery took place, and the man had been free from any recurrence, now two years, since the last operation. He could talk well, could swallow well, had no inconvenience of any kind. The small portion of tongue which had been left had spread out, as was usual after these operations, and tried to fill the void.

THE PRESIDENT inquired of the patient about sensation and learned that the sense of pain had returned over the region of the wound covered by skin-grafts only within the last two or three months, while temperature sense was still absent; also that he could not taste with the end of the tongue but had taste during the act of swallowing, or on the back of the tongue. The loss of taste at the tip of the tongue was difficult to account for. Even where the chorda tympani was cut across the loss of taste was only temporary, say for three or four months.

DR. MCBURNEY replied to a question that the recurrence had not been in the submaxillary gland, for this was seldom involved; it had been in other glands in the submaxillary region.

A Case, with Specimens, Illustrating the Fallibility of Physical Signs.—DR. GEORGE L. PEABODY reported the case (see p. 421).

DR. KINNICUTT thought the case was a most interesting one. He had never seen one like it. As to the belief on the part of Dr. Peabody that the pleural cavity contained fluid, it was quite natural under the circumstances. After considerable experience he had come to the conclusion that one of the most difficult things was to determine positively the presence of fluid in the pleural cavity by the physical signs alone, and he was no longer satisfied until he had introduced a needle to confirm the diagnosis.

DR. PEABODY remarked that he had introduced the hypodermic needle and obtained fluid.

DR. KINNICUTT thought he probably would not have obtained fluid had he not gone well down, which was not the custom when the chest was half full of fluid. He did not think it would have been possible to make the diagnosis in the case related. In asking for the opinion of others with regard to the use of the exploratory needle in supposed pleuritic effusion, Dr. Kinnicutt said he had himself many times supposed there was pleuritic effusion when in reality there must have been only plastic exudation. He had also failed a number of times to obtain fluid when the physical signs pointed that way, and had been unable to obtain an autopsy to clear up the diagnosis.

DR. PEABODY said he agreed with Dr. Kinnicutt perfectly, that aspiration was the only way to determine with certainty the presence of fluid in the pleural cavity. He had resorted to this means of diagnosis hundreds of times and had never known harm to result. But sometimes when he introduced the needle and did not get fluid he still was in doubt, for it had happened to him, as doubtless it had to all, to aspirate and obtain no fluid when afterward it was proven to be present.

DR. BEVERLEY ROBINSON said the topic was an extremely interesting one to him as it was related to the subject upon which he had read a paper before the New York Academy of Medicine the previous evening. He had there stated that although pleurisy was one of the most common diseases we had to deal with, still we frequently were in error with regard to the physical signs. The discussion which had followed upon his paper was an interesting one, but it was largely upon the question of differential diagnosis, whereas it had been his intention only to call attention to the fact that many of the signs might be absent when it was known that pleurisy existed. He had been surprised to hear Dr. Page express the opinion during the discussion that paracentesis thoracis was a serious surgical operation, and that one should always hesitate and think before resorting to it. Dr. Robinson could say, with Dr. Peabody, that he had aspirated frequently and had never seen any injury result. Nor did he think it injurious to withdraw fluid when there was some fever, that is, during the acute stage of the pleurisy. Although the fluid might reaccumulate, still it was in diminished quantity, and there was no evidence that the thoracentesis added to the irritation or inflammation. He referred, of course, to puncture with an aseptic needle in an aseptic manner, and not to experience during the preantiseptic period. His convictions upon the subject were sufficiently strong to lead him, if he should have pleuritic effusion in his own chest, to ask that some of it be withdrawn, unless the quantity were small, and not wait for absorption brought about by medicinal measures.

DR. KINNICUTT said his rule had been like that of Dr. Robinson's. For a number of years in hospital practice it had been his custom in acute pleurisy with fever to aspirate in a very few days if the fluid accumulation went on increasing. He had never known anything but good result from it. On the contrary, he had frequently seen patients who had been in the hospital a week, with fever and the chest partially or entirely filled with fluid, show most marked benefit from withdrawal of more or less of the fluid, the temperature falling and improvement taking place in all respects. He would not say that he had not seen effusion recur, but it was less in quantity, and the results had been better, as Dr. Robinson had said, than they would have been had one waited, a course

which would lead to a change of the fluid into the purulent form or to danger from compression.

Dr. Roosevelt said he knew of no way in which the diagnosis of pleurisy with effusion could be made in every case. He had taken pretty careful notes of the physical signs of the cases entering Roosevelt Hospital, and had found the signs rather puzzling in some instances. In one of the more curious cases there was flatness at the left apex in front, dulness behind, together with bronchial breathing and bronchial voice, also slight bulging in the region of the chest. It was a case of encapsulated pleurisy, compressing the upper lobe, the diagnosis being established by withdrawing fluid. A change of position did not cause a change of physical signs.

Signs which were frequently overlooked in pleurisy with effusion related to the compressed lung, a dulness on a line with the flat area below the scapula, triangular in shape, the apex upward. Over this compressed lung one often got râles.

Dr. Robinson said that a number of years ago an Italian author had called attention to a difference in the physical signs according to the nature of the fluid present in the pleural cavity, whether it were clear serum, contained fibrin, etc. The signs would also vary more or less, according to peculiarities of the individual chest. It ought to be understood that if one relied upon the signs ordinarily spoken of in text-books he would sometimes be in error.

Dr. Andrew H. Smith thought the only sign which one could place absolute reliance upon of fluid being in the chest was the change produced by change in position, and when that was absent, as it frequently was, the next absolute sign was thoracentesis. The case related by Dr. Janeway during the discussion on Dr. Robinson's paper differed from Dr. Peabody's in that the lung was not infiltrated with blood. The specimen presented seemed to be almost or quite unique.

The Safety or Danger of Aspiration in General for Diagnostic Purposes.—Dr. Robinson inquired of Dr. McBurney as to the safety of aspiration for diagnostic purposes when applied to different cavities, as the peritoneal, in abscess of the liver, etc. At one time it was, he believed, looked upon as a safe procedure and justifiable in the peritoneal cavity, provided the needle and other things were clean.

Dr. McBurney thought the needle could be introduced with extraordinary immunity in many regions of the body, but he would not admit that it was a perfectly harmless procedure, and his own feeling was that aspiration should never be resorted to without solid reasons for it. If the case could be diagnosticated satisfactorily without it, the needle should not be used. As to aspirating in abscess of the liver, to establish the diagnosis, he was satisfied that had this been done in a number of cases operated upon by him the result would have been disastrous. The tense cyst-walls would have caused the fluid to squirt out, on withdrawing the needle, into the peritoneal cavity. The introduction of the needle into any portion of the intestinal canal was, he thought, absolutely unjustifiable.

It might do no harm if the intestine at that point were adherent to the abdominal wall, but that was not known. Even though there were no escape of contents through the puncture, the needle itself on being withdrawn would be liable to affect the peritoneum.

Dr. A. H. Smith: Yet a few years ago it was taught to be quite proper to puncture the intestine for the relief of tympanites.

Dr. Kinnicutt said the objection based on the danger of infection in puncturing the peritoneal cavity would not apply in the pleural cavity.

Dr. McBurney said he had seen cases of pleurisy in which, had one thought it safe to puncture with the needle in all instances, he might have been misled to resort to this measure and incurred great risk by entering another and displaced viscus. He had the same feeling about the use of the hypodermic needle for diagnostic purposes, where it was not really called for, that he had about giving medicine. In his opinion, medicine should not be given without a distinct object, for he was not a believer in the harmlessness of drugs.

Replying to an inquiry by Dr. Robinson, whether he had seen puncture of the peritoneal cavity produce peritonitis, Dr. McBurney said he had only known of cases where the needle had been supposed to cause the trouble, but there had not been opportunity to establish the fact by operation or autopsy.

The Kidney and Liver Punctured.—Dr. Peabody had once made an autopsy on the body of a child whose abdomen had been punctured by a surgeon for the withdrawal of fluid in order to establish the diagnosis, and it was found that there had been a tubercular ulcer of the appendix which had ruptured. It was also found that the needle had not entered the pus sac, and no fluid had been obtained, but it had penetrated the kidney and there was blood on this organ: the liver had also been punctured.

Dr. Robinson thought a large needle must have been used. He had seen the lung punctured frequently without harm resulting.

Death from Puncture of the Lung and Gall-bladder.—Dr. Roosevelt had known death to result from puncture of the lung. He also knew of a case where puncture of the gall-bladder had resulted in death from escape of contents. This would not have happened had a sufficient amount of the fluid been withdrawn to relieve tension so that the walls could afterward have collapsed and closed the puncture. In the case of puncture for pleuritic fluid, the needle was more apt to enter the lung if fluid were not present.

To Render the Needle Aseptic.—The question of methods of rendering the needle aseptic arising, Drs. Robinson and Peabody thought that in hospital practice it was usual to rely on leaving the needle for some time in a strong solution of carbolic acid or bichloride, say 1 to 20 of the former, and to draw some of the fluid through the needle. Dr. McBurney thought boiling would be the safest plan, but he fancied infection was not often carried in by the needle. Where infection took place it was more likely to be from the skin of the patient, yet this could be rendered clean by soap and water and ether. Dr. Roosevelt said that at Roosevelt they boiled the needle in a test tube.

Abductor Paralysis of Vocal Cords; Tracheotomy.—Dr. Beverley Robinson presented the patient. Mr. R——, aged thirty-three, clerk, admitted to Dr. Robinson's wards March 25, 1892, Dr. Hollis, House Physician. One sister died of phthisis five or six years ago, having had a cough for eighteen months. Since then a brother has been living in a mild climate on account of "weak lungs." Patient lived in very close companionship with these two members of his family, but his own trouble antedated theirs several years. No family rheumatic history, but patient had two severe attacks of acute articular rheumatism, the first seventeen years ago, the next two years later, each time with cardiac symptoms. Has always been short of breath on exertion. No specific history.

Formerly accustomed to use his voice excessively. About ten years ago, after more severe use of voice than usual, contracted a severe cold, with, apparently, an acute laryngitis, was very hoarse, had intense soreness of throat, aggravated by talking, with some dyspnœa. The cough and soreness subsided in a few days, leaving considerable difficulty in phonation and also in inspiration, which has persisted ever since. Has been able to do more or less work, though difficult inspiration and phonation have been growing gradually worse, until three weeks ago, when, without assignable cause, they became very much worse than formerly, making it almost impossible to sleep, as breathing requires strong voluntary exertion. The difficulty is increasing. During early years of the trouble there was some pain, localized about centre of sternum. None recently. There has always been moderate expectorant cough.

Light diet. In bed most of the time. ℞. Hydrarg. bichlor., gr. $\frac{1}{100}$, q. 2 h. Turp. and soap lin., equal parts, applied on cloth to neck. Continuous steam inhalations of tr. benzoin co., drachm 1 to each pint of water. Codeine, gr. ⅓, q. 4 h. One dose sod. brom. and urethan (½ to 1 drachm.)

March 26th.—Scarcely sleeps any. ℞. Sod. salic. and pot. cit., āā gr. xx., q. 4 h. No underlying physical condition has been found to account for condition of throat. The inhalations give a little temporary ease. Urine ac., 1.030, tr. alb., no sugar — microscopical examination negative.

March 27th.—Condition practically unrelieved last night. Tracheotomy decided upon to relieve urgent symptoms, dyspnœa being confined to inspiration, due to paralysis of abductors. 2.35 A.M. After chloroform narcosis established patient stopped breathing, face very blue before relieved. Trachea entered just below cricoid cartilage, a trifle to left of median line. After introduction of tube, breathing re-established by artificial respiration and inhalations of ammonia. Considerable cellular emphysema. Much difficulty in retaining tube in place on account of its inadequate size. Condition of patient very precarious for some hours after operation. Practically comatose for rest of night. Responded somewhat to free hyp. stimulation. By 8 A.M. began to show signs of consciousness and improved from then on.

April 1st.—Condition much improved. Can sleep undisturbed. Wound doing well, tube requires much attention. Treatment stimulating and sedative. Sod. salic. and pot. cit. stopped. Listerine mouth wash. ℞. Tr. nux. vom., ♏. v., a.c. mist. Reynolds drachms 2 p.c. There is little or no reddening of vocal cords to-day; the epiglottis is less congested during phonation and ordinary respiration. When tube is stopped there is very slight movement of right cord. None on the left. ℞. Mist. pot. cit., drachms 3, q. 2 h. when awake.

April 3d.—After examination of larynx, Dr. R. P. Lincoln agrees with diagnosis of abductor paralysis, without knowing what the cause in this case is, nor could he suggest any other than present treatment except the possibility at a remote period of substituting intubation for tracheotomy tube. Took rather a serious view of outlook. Urine alk., 1.016—mic. neg. Patient allowed out of doors. Daily dressing.

April 15.—℞. Pot. iod., grs. v., t.i.d.

May 20, 1892.—Subsequent treatment simply directed to healing of wound, which is in good shape. After several trials, fitted with tube with fenestra well back. Wears a cork in daytime which is left out at night. Tube has only narrow flange. Patient comfortable, general condition good. No improvement locally.

March 11, 1893.—Patient has worn his tracheotomy tube with comparative comfort from the period he left the hospital until the present time. His larynx remains always in the same state. His general condition has been usually good. Occasionally, he has had acute attacks of dyspepsia, which he is inclined to believe are in some way connected with the presence of the tube. The question has arisen several times whether or not it would be safe to take out the tube and see if the patient could live without it. It has been decided that it would be unsafe to do so, unless some operation could be suggested which would prevent the vocal cords from approximating toward the median line during slightly forced inspiration. I now present my patient to the members of the Society in the hope that some practical suggestion may be offered which can be carried out without great risk and which would enable him to get rid of the tube permanently. I have not thought favorably of intubation because I do not see in what manner it could be beneficial for any lengthened period and in any event I do not believe a cure could be obtained in this manner. To attempt any surgical interference through the mouth, such as cutting away a portion of one or both vocal cords by means of some specially devised instrument for this purpose, does not appear justifiable in view of the uncertainty of the results to be thus effected and with the certainty that the voice would be greatly impaired, or even lost. Indeed I know of no case on record in which such an operation has been actually performed with any great, or ultimate, benefit. One specialist of this city has informed me that he performed an operation of this kind with temporary benefit, but he lost sight of the case later on and could not tell me definitely as to its final outcome. Can any external operation be suggested which shall prove of real benefit to the case, or must my patient resign himself to wearing his tracheotomy tube indefinitely?

NOTE.—Upon further examination of Dr. Robinson's patient Dr. C. L. Dana stated that there was unquestionably present an ocular defect of the left eye, of the nature of a monoplegia, which probably dated back many years and was doubtless closely connected with the paralysis of the abductor muscles of the vocal cords. This fact, in his judgment, pointed to the seat of the primary lesion being in the central nervous system and rendered the case one of unusual interest, possibly unique, so far as he knew, looked at from this double standpoint.

DR. MCBURNEY thought that a subhyoidian laryngotomy offered a chance of ameliorating the patient's condition and making it possible to get rid of the tube. He recommended such an operation and he explained to the members of the Society the manner in which he would proceed so as to bring about a condition such that the vocal cords would no longer come together during forced inspiration. He did not regard the operation as a very risky one and thought it preferable to allowing the patient to continue longer wearing his tube and running the grave chances involved in his present state.

DR. MCBURNEY thought a plastic operation could be done which would keep the vocal cords apart, but he would wish to see the patient more than once before passing an opinion.

DR. ANDREW H. SMITH said he once had a patient with apparently this condition, necessitating tracheotomy and the wearing of a tube. He was then put upon antisyphilitic treatment and apparently recovered the use of the vocal cords, so that Dr. Smith was led to take out the tracheotomy tube, but unfortunately in a short time the man was suddenly seized with dyspnœa and died before relief could arrive.

An Unusual Case of Meningitis.—DR. W. G. THOMPSON related the case (see p. 422).

DR. KINNICUTT thought it was very difficult to say whether there was any relation between the fall and the onset of the disease. He had seen almost a similar case within a year, in a child which was brought to the hospital with marked symptoms of cerebro-spinal meningitis. Indeed, it seemed there could be no doubt about the diagnosis. The child recovered. The history, briefly, was that the child while playing on the street was struck on the head by another child and almost immediately the symptoms developed for which she was brought to the hospital. Examination showed an eruption, opisthotonus, exceedingly severe headache, irregular temperature, irregular pulse.

Eye Symptoms under Ophthalmoscopic Examination.—It was known that in tubercular meningitis a blow or an injury would sometimes set up trouble which apparently had been latent, and he thought it was possible that a blow might cause an earlier explosion of the symptoms of cerebro-spinal meningitis of non-tubercular nature if the infection had already been received into the system.

THE PRESIDENT said that recently he had seen a child which two years ago had been struck on the head by a policeman, was taken home, immediately developed symptoms of cerebro-spinal meningitis, was taken to Roosevelt Hospital where it remained two months, and recovered partially but not entirely. There was no eruption in this case, and he believed it was diagnosticated as a simple case of traumatic meningitis.

They saw in Bellevue Hospital cases of meningitis and cerebro-spinal meninigitis which started on a basis of al-

coholism, trauma being superadded, together with infection through the nose, ears, or elsewhere. At any rate the probable explanation seemed to be an ordinary septic infection, perhaps from the nose or ears, and to say positively the case was one of spotted fever would require, he thought, a bacteriological examination.

Dr. Samuel Sexton was reminded by the president's remarks of being present with a surgeon when the latter was called suddenly to see a child in consultation which, during a mild attack of scarlet fever, rapidly developed symptoms of meningitis with convulsions. Some years before the child had sustained a blow upon the head, from which it recovered, but this was thought to have had some causative relation to the presence of a brain tumor found post mortem.

Surgical Suggestions.

Buboes are successfully treated by drawing off the pus through as small an opening as possible, washing out thoroughly with 1 to 1,000 bichloride, and injecting ten per cent. iodoform in liquefied vaseline and sealing up hermetically.

Cancer of Rectum.—Dr. McCosh makes a posterior or sacral incision, removing the bone in part if necessary. If the peritoneum is opened no attempt is made to close it, but it is packed with iodoform gauze. It is claimed that—1, permanent cure may be obtained (after repeated incisions); 2, that even if the disease returns, life is prolonged more than after colotomy, and greater relief is afforded. The mortality from operation is about nineteen per cent.; permanent cures about eleven per cent.; and the operation may be successful even when the disease extends higher than the peritoneal attachment.

Old Age is not a contra-indication to ovariotomy. Dr. Johnson records three cases in sixty-seven- and sixty-eight-year-old women. Thirty-eight recent cases between sixty-seven and eighty-two showed only two deaths.

Resection of the Urethra has been practised by Heurtaux. In one case, five weeks after an injury, a portion of the canal, one and a half centimetre long, was removed and the ends united by suture. A catheter was inserted and the soft parts were sutured in stages. No drainage was used. Urine escaped for a time through a fistulous opening, but this soon closed of itself and patient made a good recovery.

Sprained Ankle.—Douche with warm water, 112° to 115° F., for ten to twenty minutes. Then apply, over thin layer of cotton, plaster-of-paris roller bandage (three-inch-wide Schorse's, or improvised with good dental plaster rolled in crinoline) evenly from the toe well up the calf of leg.—*Hot Springs Medical Journal.*

Circumcision.—Dawbarn says keep a piece of drainage-tube fastened about the root of the penis to avoid unnecessary loss of blood. The prepuce should be removed and not simply slit, leaving just enough to cover the glans. Slit up the dorsum, seize the cut edge with forceps and trim with scissors, removing skin and mucous membrane at same stroke, leaving moderately long at frænum. Use running suture of catgut and paint with five per cent. aristol collodion. Keep dry, use no ointment, dust, and wrap in cotton.

Removal of the Stapes.—In speaking of a case in which remarkable improvement of hearing, followed this operation, Dr. Jack says: "Not only is the simple removal of the stapes much better in its results than the removal of the two large bonelets only, as shown by the operations already performed, but on the ground of conservative surgery it is also much to be preferred. It produces greater improvement in the hearing, and, according to my experience up to the present, there has been no inflammatory reaction whatever, or any other bad results."

Gall Bladder Extirpation, Czerny says, is indicated only in cases of severe inflammatory or carcinomatous involvement. When the ductus choledochus is closed, the operation is absolutely indicated if the strength of the patient will permit. If one does not succeed in removing the stone or obstruction then it is recommended to produce a fistula between the gall-bladder and duodenum.—*Deut. Med. Woch.*, No. 23, 1892.

Drainage.—The time required for primary drainage is from twenty-four to sixty hours; to wait longer is to encourage trouble; to remove sooner than twenty-four hours is taking risks not warranted in the premises. Necessity for artificial drainage will often arise in wounds invading the large cavities; here inflexible tubular drains (glass) best meet the requirements, aided or not by materials acting by capillarity.—Cartlege.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

VIRCHOW IN LONDON—LECTURING BEFORE THE ROYAL SOCIETY ON THE POSITION OF PATHOLOGY IN THE BIOLOGICAL SCIENCES—A BANQUET TO HIM—HONORARY DEGREES TO BE CONFERRED—DEATH OF MR. SIBLEY—INFLUENZA—SMALL-POX—ANTI-VACCINATIONISTS AND LEPROSY.

London, March 17, 1893.

This week we have had an excitement—I may say, perhaps, a sensation—in London such as occurs but seldom. Professor Virchow came over to deliver the Croonian Lecture before the Royal Society yesterday (March 16th). Of course the announcement that he would do so caused no little flutter in medical circles, and it was soon obvious that a large audience of distinguished men would assemble to hear the author of the cellular pathology. The theatre of the University of London was lent for the occasion, and Lord Kelvin (Sir W. Thompson), our one peer of science, in his office of President of the Royal Society, presided. The theatre was crowded with the representatives and the followers of biological and medical science, who loudly cheered the illustrious professor when he entered. He first signed the roll of the Society as an Honorary Foreign Fellow, and was formally admitted by the President. He then rose to deliver his address, which he gave in English. It took about an hour and a half, and was attentively followed by the audience, which frequently applauded. At the conclusion Sir Joseph Lister was called upon by the President to propose a vote of thanks, which he did with commendable brevity and good taste, only remarking that it was almost a work of supererogation as the audience had already testified their gratitude by their applause, and it appeared difficult to say which was most admired, the erudition, the wisdom, or the eloquence of the lecturer. The proposal was seconded by Dr. Wilks, who said he regarded the professor as his master and teacher from his earlier studies in pathology, and as they were about the same age this only showed how early in life the lecturer had attained a commanding position in science. Then Professor M. Foster asked the lecturer to reply in a few German words, which he did in graceful compliment to England, which had never been behind other nations in the pursuit of science. Those who were not perfectly familiar with German scarcely approved Professor Foster's suggestion; but the occasion was unique, the address had given much food for thought as well as for pleasure, and we were all too delighted to have been present to suffer any slight annoyance to mar our satisfaction.

In the evening a banquet was given to Virchow, presided over by Lord Kelvin. Next Tuesday (21st) an honorary degree is to be conferred upon our visitor at Cambridge, and on the 23d Oxford follows suit, so that he will probably remain in England throughout the com-

ing week, during which he will be entertained by Sir J. Paget, Sir J. Lister, Sir J. Lubbock, and other friends.

Respecting the lecture itself it would be impossible to give the barest abstract in a letter, and any attempt to criticise it would be impertinent. Suffice it to say that the present position of pathology among biological studies was the subject chosen, and Virchow traced the development of the science as from an historical point of view, especially dwelling on the action and reaction of German and English minds on each other for the last three hundred years. If only we could have more of such analyses of points in the history of medicine I cannot but think that the profession generally would become more learned as well as more critical, and that we should be saved from many of those bizarre hypotheses and speculations which too often discredit us and retard progress. This lecture, to take one single point, will rescue from the obscurity into which his brother Englishmen have suffered it to fall the name of Glisson as the real originator of the doctrine of irritability. Glisson's idea of the "elementary life of the several parts of the body" was an important link in the chain which led to the recognition of the elementary life of the cell, and so to Virchow's dictum, *omnis cellula e cellulâ*, whence a short step leads to the location of disease in cells, and so the "cellular pathology" which has dominated modern medicine from the time that Virchow announced it.

Mr. W. S. Sibley died yesterday from cerebral hemorrhage. He was the first general practitioner who obtained a seat in the Council of the Royal College of Surgeons, and had occupied other prominent posts in the profession. His character and acquirements secured him general esteem.

Influenza exhibits some signs of decline, but there are still many cases. Small-pox still maintains its hold in London, the last weekly returns giving 50 cases and 6 deaths, and over 200 cases in the hospital ships, besides those in the hospital at Highgate. Still the anti-vaccinationists pursue their fad with apparently much unscrupulousness. Lately they have said that vaccination spreads leprosy—an absurd statement, at once denied by Dr. Abraham, the Secretary of the Medical Committee of the Leprosy Fund. Of course, the monstrous assertion is duly repeated, and deludes some of the ignorant, though it is no more sensible than that of a poor woman who declared she would not have her baby vaccinated because the last one fell out of the window soon after the operation.

THE ILLINOIS MEDICAL PRACTICE LAW.

To the Editor of the Medical Record.

Sir: Your issue of February 11th contains an article by Dr. C. U. Collins, of Vandalia, Ill., in which the author says, "I wish to enlighten you a little upon the effect of the Medical Practice Act in Illinois," and then goes on to show a certainly deplorable state of affairs in his section of the great Prairie State, claiming (at least negatively) that the whole trouble is due to the creation of the Illinois State Board of Health.

Being a native of Illinois, and having received my first license to practise medicine from the Illinois Board, and having been for several years actively interested in securing and maintaining a Medical Practice Act in Montana, is my only warrant for suggesting that the doctor puts it too strongly when he asserts that "Illinois is one State where no good results have followed the legal regulation of medical practice."

The writer remembers very well the general exodus of quacks from the State when the act went into effect, the State Board of Health was organized, and that splendid organizer and most efficient worker, Dr. Rauch, fired the first broadside into the ranks of the army of ignorant quacks who at that time overran the State.

That the law in Illinois is not perfect is beyond question, that it needs revision in order to make it more effective cannot be disputed; but I undertake to say that no one who has closely followed the operations of the Illinois State Board of Health is warranted in making the sweeping assertion that it has done no good outside of its work in "establishing sanitary measures," or that "it has done injustice to reputable physicians," etc.

As a matter of fact, many of the best laws in other States were largely copied from the Illinois law, and if medical legislation in that State had accomplished nothing else, it has been exceedingly useful in making a general and healthy sentiment in favor of medical legislation elsewhere, where such laws have been effectual. I instance the existing laws in Minnesota, Montana, Washington, and Oregon.

The doctor says, "There is a bill before our State Legislature now to abolish the State Board of Health, and there is a large sentiment throughout the State supporting the bill." It is to be hoped that those who are engaged in regular practice in that State will not lend themselves in aid of the "itinerants, quacks, patent-medicine vendors," etc., which latter class, I have no doubt, are at the bottom of the movement to have the law abolished. To antagonize a law which is not perfect, or perhaps even satisfactory to a considerable number of reputable physicians, is to place one's self in line with those who are opposed to everything that tends to elevate the tone of the medical profession.

Only within the last few weeks an applicant appeared at the office of the Secretary of the Montana Board, and asked for a license to practise till the next meeting of the Board, stating that he held a certificate from the Illinois Board. He did not produce the Illinois certificate. The Secretary investigated his case and found that he was not licensed in Illinois; he was refused a license here and is still travelling West, as far as is known. This is only one of a number of similar cases claiming to hail from the State of Illinois. And as far as these are concerned the people of Illinois have been protected, and by co-operating with the Illinois Board Montana has compelled them to "move on."

The Illinois Board has done a glorious work for the citizens of that State and in fact for all the States. If a stray quack finds a temporary location, do not condemn the Board, but aid it in driving out all who are not worthy. It would be a misfortune, indeed, not alone to Illinois, but to the whole country, if the power of that Board was curtailed; better increase than diminish its authority. Its acts and rulings are accepted as authority by other State Boards, and to its efforts are largely due the present high standard of "medical education in the United States."

C. K. Cole, M.D.

Helena, Mont.

M. Hippolyte Adolphe Taine, the well-known French critic, whose death, at the age of sixty-four, occurred on March 5th, suffered from diabetes and pulmonary tuberculosis. About a week before his death he was very low and life was despaired of, when it was determined to employ Brown-Séquard's injections of testicular juice. The immediate effect was very gratifying, the patient rallied, and his condition improved so markedly that his friends even began to hope for his recovery. A relapse occurred, however, in a few days, and a subsequent injection produced no result.

Symphyseotomy on a Man.—At a recent meeting of the Paris Academy of Medicine, Dr. Albarran presented a man upon whom he had operated for epithelioma of the bladder. The neoplasm had been removed two years before by suprapubic section, but it had returned. The author performed symphyseotomy, by means of which a separation of forty-two millimetres between the pubic bones was obtained, thereby exposing a considerable surface of the bladder. A segment of this viscus, six by four centimetres in extent, was removed, and with it the new growth. Recovery was complete, and the patient is now able to walk without the slightest inconvenience.

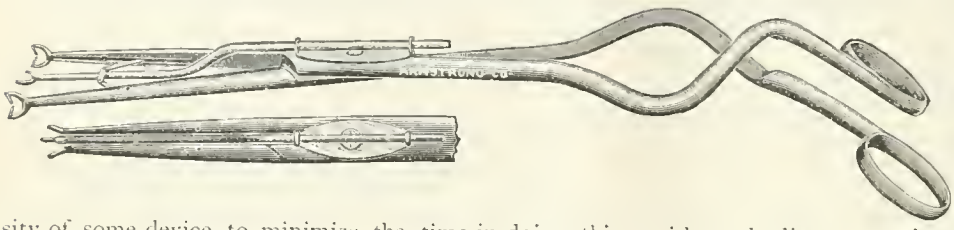
New Instruments

A NEW KNOT-TIER.

By A. H. CORDIER, M.D.,

KANSAS CITY, MO.

In doing abdominal and pelvic surgery much valuable time is often expended in tying sutures and ligatures in the recesses found in these localities. Feeling the necessity of some device to minimize the time in doing this difficult part in this class of surgery, I have devised an instrument known as the "Cordier Knot-tier." The working of this instrument has proved to fill, in every respect, my greatest expectations. Its application has a wide range, and will, I trust, prove to be as invaluable to others as it has been serviceable to me.



I will briefly mention a few of the many operations in which this instrument can be used to a good advantage in saving time and doing good execution.

In a vaginal hysterectomy where the uterus is fixed and it is impossible or inadvisable to drag the organ down within easy reach, and where the operator is using ligatures on the broad ligaments or even in the vaginal vault, where the sutures are introduced to stitch the peritoneum to the cut edge of the vagina, as is recommended by Martin, the application of the tier here is indispensable.

If an artery is divided in an inaccessible locality, when it is almost impossible to tie with the hands, the tier will quickly secure the vessel and permit of the forceps being removed at once. In vesico-vaginal fistulæ the sutures can be tied in an incredibly short period by the aid of the tier.

In performing an Emmet's operation on the cervix in a small vagina or on a cervix that is not within easy reach and where the operator is using silk or catgut, or even silver wire or silkworm-gut, the knot can be run up and tightened as quickly as if on the surface of the body.

In performing the Eastman operation, or total abdominal hysterectomy, the instrument is indispensable as a time-saving device.

In suprapubic cystotomy for the removal of tumors or an enlarged prostate, if ligatures or sutures are to be used, the operator is certainly working to a great disadvantage without an instrument of this kind to do the tying quickly.

Where the surgeon is operating to remove an impacted gall-stone in the cystic or common duct, and it is found necessary to split the duct over the site of the stone, the tier will aid him very much in tightening the sutures when he comes to closing the opening made in this canal.

In the small capillary bleeding hæmorrhoids, where the hemorrhage may be so great as to endanger the life of the patient, the quickest and surest procedure is to ligate the small raspberry-like tumor; the tier is here of much service, making an otherwise tedious procedure one of very quick and easy performance. This variety of hemorrhoidal tumors is usually situated high up in the rectum. Allingham has well said: "The secret of the well-being of your patient (in ligating internal hæmorrhoids) depends greatly on this tying—a part of the operation by no means easy, as all practical men know, to effect."

Of 29 cases of splenectomy 14 died directly from hemorrhage and 3 from shock. The difficulty in tying the vessels and the great shock produced by dragging on the pedicle can be avoided by the use of the tier. The application of the instrument has a wide range.

As the reader will see by the cut it has the same arrangement governing the movements of the blades as is used in Knott's uterine dilator. The carriers have automatic threading ends, this permits the ligatures to be quickly placed in position to be tightened as soon as the handles are closed. Between the blades (see cut) is the loop-carrier, which carries the loop down to the exact place where the surgeon desires the knot to be tightened, this carrier holds the loop or knot stationary while the blades are being separated and the knot tightened. The ends of the ligatures are held in the left hand of the surgeon. As soon as the knot is tightened down on the vessel, or the suture is so secure that it will hold its place, the carrier automatically retracts. The sutures may be tightened even with more force than it is possible for the hands to stand without the ligature cutting the fingers. These are only a few of its many applications. The tier is manufactured by William H. Armstrong & Co., Indianapolis, Ind.

RIALTO BUILDING.

A NEW NASAL BOUGIE.

By LEONARD A. DESSAR, M.D.,

NEW YORK.

The difficulty experienced by every rhinologist in keeping apart adhering surfaces in the nasal cavities as well as in dilating nasal stenoses, led me to devise this simple instrument. In the use of the galvano-cautery in the nasal chambers there is great danger while cauterizing the turbinated bodies of also abrading the septum, especially where these structures approximate. In consequence of this a granular bridge-like adhesion of these structures may follow the operation, especially if the patient neglects to return within a few days. The advantage of the bougie in these cases is that it may be intrusted to the patient, with the instruction of inserting it several times daily, thereby preventing the adhesions from taking place. It should be slightly anointed with cocaine or antiseptic ointment before introduction and can be easily passed by the patient. It will also prove useful in the surgeon's hands in rupturing adhesions, after which it may be intrusted to the patient to keep the

surfaces apart. The instrument is made of vulcanized rubber and is one-eighth of an inch thick, four inches long, and three-eighths of an inch wide. It tapers to a thin rounded edge and at the other end is provided with a rounded handle, with depressions for the thumb and forefinger. The makers are Messrs. Tiemann & Co., of New York.

The Price of Drugs in Europe and America.—The Union of Danish Chemists has had prescriptions dispensed at some of the principal drug stores of foreign countries in order to compare the prices paid for drugs abroad with those current in Denmark. From their inquiry it appears that Denmark is the place where drugs are cheapest. If the Danish rate of prices be taken as 100 we get the following scale:

Norway	116	Switzerland	149
Austria	117	Portugal	163
Hungary	125	Russia	197
Sweden	126	Italy	242
Belgium	141	France	247
Germany	145	England	259
Holland	147	United States	350

New York is the city where drugs are most expensive, for what can be got for twenty cents in Copenhagen costs about seventy-five cents in New York.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 1, 1893.

Erysipelas	0	0
Leprosy	0	0

"NOTICE.

"All parties welcome! Young lady of 24 years of age, after long trouble, has passed a tape-worm of 32 yards long. Can be seen at ——, 2d flat front. Admission, 25 to 50c. Mrs. W. D——."—*North American Practitioner.*

The Italian Government has established a quarantine against vessels from the French Mediterranean ports.

Naphthol is recommended as an efficient vermifuge by Dr. Dubois, of Amiens.

A Diagnosis by the Herr Portier.—A story is to hand from Hamburg, which shows how easy it is to go astray in the attempt to "spot" diagnosis. When the epidemic of cholera first broke out instructions were given to all hotel-keepers to be on the watch for possible cases of cholera. In accordance with these delegated orders the first-floor *Kellner* at one of the principal hotels had his attention drawn to a certain traveller who was observed to make for the lavatory six times within the hour. On being informed of this fact the proprietor promptly telephoned the authorities, and in about a quarter of an hour the sanitary authorities appeared on the scene, and, all protestations to the contrary nevertheless, seized and transported the hapless wight to the "observation ward" of the cholera barracks. There he was examined by a doctor, but strenuously denied suffering from diarrhœa, much less cholera. "But," retorted the doctor, fortified by information received, "you were seen to go half a dozen times to the closet in less than an hour." "That's true," replied the patient; "but it was solely because there was someone in there on the first five occasions."—*Medical Times and Hospital Gazette.*

Mr. Lawson Tait is contemplating removal from Birmingham to London, so states an English contemporary.

Much Ado about Nothing.—The Dublin correspondent of the *Medical Times and Hospital Gazette* announces that twelve doughty knights and a real live lord, two hospital porters, and a regiment of soldiers recently assembled to meet the Viceroy of Ireland, Baron Houghton, who came not to open a hospital, or even a new wing, but a single cot in the Orthopedic Hospital.

A High Rate.—A doctor in the Northwest recently presented a bill of $245 for 147 prayers which he breathed forth on behalf of a patient in a Southern State. The patient died and the court decided, in view of the result, that the prayers were not worth $1.66 apiece, and therefore disallowed the claim against the estate.

A Scandalous Purge.—One of the smaller items of expenditure brought to light in the Panama investigation was one of $120,000 for catharties.

Disquieting to the Survivors.—*The Medical Press* states that ten Spaniards, of whom two were children, were returning to their country after having been treated at the Pasteur Institute for wounds received from rabid animals. When the train arrived near Montpellier one of the children, a boy, aged twelve, began to show evident signs of the disease. He became so excited that he had to be bound in rugs and held down by force until the train stopped at Montpellier, when he was carried to the hospital, in which institution he died the same night.

A Foe to Malaria.—The anacharis alsinastrum, a water-plant, originally from Canada, but now naturalized in Europe, is said to destroy malarial germs. It was formerly regarded as a nuisance, as it grows very rapidly and soon chokes up small streams. But it has now been proposed by a German physician, in Hanover, to plant the weed in malarious districts as a means of rendering them healthy. The same was suggested some six or seven years ago by a writer in an English pharmaceutical journal.

A Breach of Promise Case.—A Glasgow physician is the defendant in a curious breach of promise case. His courtship was progressing smoothly enough until his *fiancée* requested his services for treatment of a fistula. The trouble was of tuberculous origin. He treated the case, but lost his affection for the fair but unfortunate patient. Perhaps if he loses his case he can offset the damages by a bill for professional services.

Death from Two Drops of Laudanum.—A man was recently tried in England for causing the death of his month old infant. The child was restless and he gave it two drops of laudanum. Death occurred the following day, with symptoms of opium-poisoning.

A Cry Comes from British Columbia that the profession there is already overcrowded, and practitioners in other parts of the world are entreated to keep away from that special region.

An International Weather Bureau.—The United States Government has invited the Governments of Europe to send delegates to a meteorological conference, to be held in Washington, looking to the establishment of an international exchange of weather reports. It is hoped that the study of meteorology may thereby be greatly facilitated, and data may be obtained upon which to base more accurate forecasts of approaching storms.

Philadelphia has a population of 13.8 to the acre, giving an allowance of over 3,000 square feet to each inhabitant.

The Legality of Cremation in Great Britain was affirmed at the trial of the late Dr. Price, of Wales, who cremated the body of his infant son on the top of a hill in accordance with ancient Druidical rites. He was indicted for this act, but the legal authorities stopped the proceedings on the ground that there was nothing illegal in this manner of disposing of the bodies of the dead. Since that time several cremation societies have been established in England.

The Medical Profession in Italy.—According to official statistics recently published, the number of medical practitioners in each of the principal cities of Italy is as follows: Turin, with a population of 613,995, has 431 doctors; Genoa, with 425,854 inhabitants, has 240; Milan, with 575,164, has 391; Venice, with 149,686, has 124; Bologna, with 354,584, has 215; Florence, with 539,855, has 281; Rome, with 507,504, has 506; Palermo, with 486,448, has 316; Messina, with 238,294, has 117; while Naples, with 678,801, has 1,323.

Dr. William Bateman, of Folkestone, died recently at the age of eighty-one.

The Duke of Edinburgh's Wing is the name given to a recently completed addition to the British General Hospital.

Any Medical Man can practise in Great Britain, but he cannot call himself Dr. unless he possesses a degree legally recognized there, nor can he recover for medical services in a court of law.

Capillary Drainage in Anasarca is practised by Dr. Schilling by means of fine silver wire passed through the cellular tissue.

A Vaccine Institute is about to be established in Constantinople.

An Italian Hospital has been instituted in Tunis.

Blistering by Living Cantharides.—Mr. Richard Leigh writes to the *Lancet* that a correspondent on the West Coast of Africa recently wrote him that the resi

dents were suffering from a plague of the cantharides fly, as he termed it. These insects were so numerous and troublesome that he was unable to rest in bed, and had to pass the night in his sitting-room, being blistered all over at the time of writing. Some of his neighbors were in a terrible state, evidently much worse than himself. Fortunately no serious trouble resulted; for though the blisters were very painful, they disappeared spontaneously in a few days. This is a new terror added to a residence in the tropics, though it must be an uncommon one, as Mr. Leigh's correspondent had not mentioned it before, though he had lived in the neighborhood three or four years. It is interesting to know that the bite of the living insect has a similar effect to that of the preparations of the dead. The active principle is evidently in the juices as well as the solids of the body.

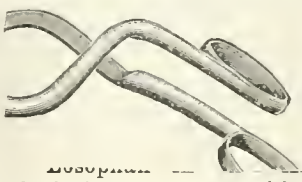
Piperazin is said to be best given in soda water, fifteen grains to the bottle, to which also fifteen grains of phenocol may be added.

The Australian Medical Congress, recently held in Sydney, New South Wales, was very successful, over six hundred members having taken part, and one hundred and fifty papers having been read and discussed.

A Centenarian.—The President of the London Society for the Study of Inebriety, Dr. Severin Wielobycki, recently celebrated the termination of his one hundredth year.

Medical Education in France.—The organization of hospitals, medical schools, and laboratories of Paris is the result of centuries of experience and change, and differs materially from that of other countries. The harmonious unity of the whole system is due to a centralization and order of government that extends to the minutest details, and simplifies and regulates the work in every branch. The abundance and diversity of teaching, the wealth of material, and the facility of study are remarkable, and, with the most generous and courteous hospitality, are freely open to all nationalities. Those who come for clinical observation and work in the hospitals or laboratories, to complete study commenced elsewhere, are subjected to no examinations or vexatious requirements, and have no fees or charges of any kind to pay. They are at liberty to follow their own inclination in choice of work or attendance. If they wish to obtain certificates or diplomas, then there are certain fixed charges, which, however, are slight. The total fees for the whole curriculum of medical study and for the whole series of examinations, covering a period of five years, to obtain the diploma of M.D., is about $175, and in this is counted the supply of anatomical material. Students and practitioners who attend the schools of the Faculty of Paris cannot but remark the facility of expression, the wide knowledge, and orderly habit of teaching which are common to almost everyone of the officers of the hospitals and schools. This is not the result of chance, but comes from a most laborious and unique system of preparation and final selection by *concours*. The hospital surgeons and physicians, the assistant professors, and the lecturers, and professors of the Faculty are all from an early date in their career compelled to aim at a complete and almost encyclopædic basis of information, and to practise the arts of logical arrangement, lucid exposition, and orderly teaching. Medical teaching in Paris comprises official, didactic, and clinical courses given by the Faculty, and hospital teaching, in which the members of the Faculty are reinforced by a great number of physicians, surgeons, and accoucheurs appointed especially for this purpose. Professors Germain-Sée, Jaccoud, Potain, and Peter occupy the four chairs of clinical medicine; Professors Verneuil, Le Fort, Duplay, and Le Dentu the chairs of clinical surgery. Besides these there are the special chairs of clinical teaching, represented by Professors Charcot for nervous diseases, Ball for mental diseases, Fournier for syphilitic and skin diseases, Grancher for diseases of children, Tarnier, surgeon-in-chief of the Maternité, with Pinard, head of the clinic of accouchement, Panas for ophthalmology, and Guyon for genito-urinal diseases and operations. Added to these there is an extensive system of free teaching by the assistant professors of the Faculty, or *aggrégés*, who train the students in the elementary and systematic courses on subjects of ordinary medical education

loop-carrier, which carries the loop down to the exact place where the surgeon desires the knot to be tightened, this carrier holds the loop or knot stationary while the blades are being separated and the knot tightened. The ends of the ligatures are held in the left hand of the surgeon. As soon as the knot is tightened down on the vessel, or the suture is so secure that it will hold its place, the carrier automatically retracts. The sutures may be tightened



Losophan —Losophan may be looked upon as a tri-iodide of cresol. It contains eighty per cent. of iodine and is soluble in alcohol and readily taken up by fatty substances. Dr. Saalfield finds a one per cent. ointment exceedingly valuable in skin diseases due either to vegetable or animal parasites, as tinea tonsurans and pityriasis versicolor; for pediculi capitis and pubis, twenty-five per cent. of vinegar is added to the ointment; and in the case of scabies a stronger preparation is employed containing two or three per cent. of losophan. In chronic skin infiltrations an ointment of the strength of one or two per cent. was very useful, but in acute eczema it appeared to be irritating. In prurigo, sycosis vulgaris, acne vulgaris and rosacea, and in pruritus it was very effectual. It appears to be of little use, however, in psoriasis or urticaria, and is contra-indicated in acute inflammations of the skin.—*Lancet*, January 7, 1893.

Damages Reduced at the Hospital's Expense.—Mr. Herbert Milton, a surgeon of Alexandria, recently won a libel suit against the *Bosphore Egyptien*. The Court of Appeals confirmed the decision but reduced the amount of damages from $5,000 to $400, on the ground that the plaintiff had signified his intention of turning over the indemnity to the hospital of Kasr-el-Aini.

"**Family Physicians of Irreproachable Character** kept in stock and supplied at short notice and in good condition," is the way an English contemporary paraphrases the prospectus of a Cincinnati medical corporation.

New Method of Treating Fractured Thigh.—At the meeting of the Medical Society of London, on Monday evening last, Mr. C. B. Keetley explained a new operation he has made trial of recently for the purpose of maintaining the fragments in position after fracture of the femur. The operation consists in passing long steel needles through the fleshy parts into the respective fragments of bone. Mr. Keetley exhibited a case treated by the above method, and pointed out that little or no irritation was caused by the presence of the needles, and he claimed to have provided a means of combating the tendency to shortening in a class of cases in which it was otherwise almost unavoidable. Mr. Jonathan Hutchinson demurred to the proposal on the ground that the long splint, if properly applied, secured good union with a minimum of shortening. The operation is one that might be necessary in certain cases, when the fragments cannot be kept in position, but in the large majority of cases good results may be insured by using the long splint.—*Medical Times and Hospital Gazette*.

Sir Joseph Lister has returned to his first love, and expresses his preference for carbolic acid over corrosive sublimate as a surgical antiseptic.

Medical Practice in Japan.—The old-style physicians in Japan have had a bill introduced in parliament legalizing their form of practice, and the modern practitioners are organizing meetings to devise measures for the defeat of the bill.

Small-pox has been epidemic in Toyama, Japan, over 1,500 cases with 489 deaths having been reported there up to the middle of January of this year.

The Influence of the Impending World's Fair continues to be felt in certain quarters, as witness the following from the Sunday issue of a Chicago paper:

"NOTICE.

"All parties welcome! Young lady of 24 years of age, after long trouble, has passed a tape-worm of 32 yards long. Can be seen at ——, 2d flat front. Admission, 25 to 50c. Mrs. W. D——."—*North American Practitioner.*

The Italian Government has established a quarantine against vessels from the French Mediterranean ports.

Naphthol is recommended as an efficient vermifuge by Dr. Dubois, of Amiens.

The Dugaste Prize of the Paris Academy of Sciences has been awarded to Dr. Maye for the best essay on "The Signs of Death and the Means of Preventing Premature Burial." The author regards putrefaction as the only sure sign of death, and advises that burial be postponed until this change has begun.

Post-marital Amblyopia.—This condition, sometimes described as Burns's amaurosis, consists in failure of vision of variable intensity consequent on sexual excess. The liability of certain persons to this form of amaurosis has long been recognized, and though probably of rare occurrence it deserves to be made widely known on account of the prognostic importance of a correct etiological deduction. In the last number of the *Archives of Surgery*, Mr. Jonathan Hutchinson relates three very typical examples of this affection, the most remarkable feature whereof is the readiness with which it is recovered from. In this respect post-marital amblyopia presents a striking resemblance to tobacco amblyopia, of which recovery and freedom from relapse are very definite features. It differs from the latter in being much more rapid in its development and in passing to a far higher degree of amblyopia. Though recovery is the rule, it must not be forgotten that in both series cases may and do occur in which the disease advances to complete and permanent blindness.—*Medical Press.*

University of Innsbruck.—The total number of students in the University of Innsbruck during the last summer semester was 849, of whom 267 belonged to the medical faculty. The teaching staff numbers 17 professors and 3 lecturers.

A Statue to Jenner is to be erected in Japan to commemorate the centennary of vaccination.

Potash-forming Insects.—At a recent meeting of the Entomological Society of London, Mr. Oswald Latter stated that the imago of the *Dicranura vinula*, in emerging from the cocoon, produces, probably from the mouth, a solution of caustic potash for the purpose of softening the cocoon. The solution was obtained for analysis by causing the moths to perforate artificial cocoons made of filter-paper. Professor Meldola said that the larva of *Dicranura vinula* secretes formic acid, but the fact that any animal secreted a strong caustic alkali was a new one.

They will Receive Attention.—A few quacks, and very few compared to the number in years gone by, are now infesting this city, whom we shall handle next issue without gloves. They have done but little or no practice since their arrival, and some of them have fallen out among themselves and left. Among the number is a certain "Divine" (?) health healer who shall receive our respects in February number. One old rooster with his office over a saloon, with the saloon building pictured as his office, shall be blistered in the most approved style. We know our duty to the profession and public, and do not hesitate to perform it. We are now securing data for these frauds, to be published next issue, and mark, the fur will fly.—*Texas Health Journal.*

The Chilian Civil War.—The loss of life in Chili during the last civil war was over ten thousand.

New Hampshire Insane Asylums.—The Committee appointed by the State Board of Health to make an investigation concerning the burning of the Strafford County (N. H.) Asylum for the Insane, has incidentally found many defects in the present county system of caring for the insane. Among these defects are mentioned: 1. Lack of suitable buildings. This defect is more or less glaring in the different counties; in some the buildings are totally unfit for the purpose, and in others, while the buildings are good, there is yet a lack of proper and ample facilities. 2. There is no classification of patients. All the different classes of the insane are grouped together in one ward, the cases of simple delusional insanity being often placed in the same room with the most violent cases of acute or chronic mania. 3. Lack of skilled attendants. 4. Lack of expert medical and surgical treatment. 5. Lack of occupation and entertainment for the patients.

A Young Doctor ordered a first class self-registering thermometer. A few days after receiving it he wrote that he had had it on ice three days, but couldn't get the mercury down. The dealer shook it down and the doctor was satisfied.

Scheming and Frankness.—The medical politician who takes roundabout, secret, and snaky methods of "getting there" confesses two self-stultifying facts: First, that his objects are not good and honest enough to be openly avowed; and second, that his strength and self-confidence are not sufficient to attempt the effectualization of his aims, except by chicane and subtlety. All the world recognizes what the politician thinks he is so expertly concealing from all the world, that is, that he is both unscrupulous and weak.—*Medical News.*

La Grippe is not Popular.—The Russians call the "grip" Chinese catarrh, the Germans call it the Russian pest, the Italians name it the German disease, the French call it the Italian fever, the Spanish catarrh, and the Americans call it —— on earth! The Italians invented the term "influenza" in the seventeenth century, and attributed the disease to the influence of certain planets. Syphilis is the only other disease which has at various times received such polygeographical designations.

The Japanese Navy.—The report of the health of the Imperial Navy of Japan for 1891, recently received, shows that there was a general improvement in the sanitary condition as compared with the previous year. The main daily force for the year was 10,223, and the total number of cases of disease or injury entered on the sick-list was 4,057, a ratio of 396.85 per 1,000 of the force. The number of deaths was 60, a ratio of 5.87 per 1,000, which is a decrease of 2.69 per 1,000 compared with the ratio of the previous year. Of the deaths 51 were from disease, 5 from injury, and 4 from drowning. There were no new cases of kakke, the one mentioned in the report having remained over from the previous year.

Diabetes Insipidus cured by an inter-current attack of measles is reported by Harvey (*Birmingham Medical Review*, No. 31, 1892). The quantity of urine, which had at one time been fourteen pints in twenty-four hours, fell when the rash appeared to eight, and four days later only an ounce and a half was passed. The next day there were fifteen ounces, and from that time it gradually returned to the normal.

No.—Dr. Larrabee says: To be able at all times and in all cases to arrive at a positive diagnosis of disease at the first visit is an impossibility, no matter how erudite the physician or how skilful the surgeon. No lawyer is able, however full his head may be of "digests," to give his client at once a wise and judicial opinion: he "takes

the case under advisement." Can a physician or surgeon be expected to do with the intricacies of the human system more than he who has only to recall his Blackstone or refer to a Revised Statute?

Hypertrophy of the Spleen is given by Bobulescu as an occasional cause of incontinence of urine in children, the attacks coming on principally after running and jumping.

Boil It Down.

Just a word to those good doctors
Who are meditating deep
On a paper they're preparing,
Full of thoughts too good to keep—
Boil it down.

'Tis not words, but facts we're wanting;
Therefore prune and pare with pains
Your scholastic evolution
Till an essence pure remains—
Boil it down.

Let the meeting at Milwaukee
Be a feast for every soul
Who attends. And let the papers
Be as brief as Moses' scroll—
Boil them down.

You'll remember former meetings,
There were papers, less or more,
Hardly worth the time to listen—
We have all been there before—
Boil it down.

Welcome every fresh advancement,
Hail each new discovered fact,
But in writing a description
That attention will attract—
Boil it down.

And remember that discussions
Are of interest all agree;
So your paper should invite it;
Make it short as well may be—
Boil it down.

—W. E. Ward, M.D., Fenton, Mich.

—*Journal of American Medical Association.*

Urticaria and Prurigo in Children.—According to Dr. Saalfeld the fact that urticaria may become transformed into prurigo adds gravity to the prognosis of this disease, and must be considered in treatment. Among children in good general condition, appropriate diet and some external application, as sulphur, naphthol, or tar ointment, and a bath every other day, usually suffices to cure the condition in a short time. But in long-standing cases a tepid bath following frictions with sulphur and tar-soap are a daily necessity. On coming out of the bath the patient may be covered up in bed for two hours and then anointed with tar, sulphur, naphthol, pyrogallic acid, menthol, or chrysarobin ointment. In inveterate cases subcutaneous injections of pilocarpine are of advantage. Certain internal remedies are indicated in children who are scrofulous or run down, or who suffer from gastro-intestinal catarrh. Country life always has a favorable effect upon this particular skin disease.—*Revue Générale de Médecine de Chirurgie et d' Obstetrique.*

Intestinal Suture by a New Method.—Dr. Kummer has devised a new method of intestinal suture. It consists in dissecting back a sleeve-like circular flap of the serous and muscular coats all around the bowel, for about half an inch, cutting off the projecting mucous and submucous coats at this level, sewing the edge of the latter to the corresponding layers of the other loop prepared in the same way, then doubling in the two redundant flaps or sleeves of serous and muscular tissue so that their serous surfaces are brought broadly in contact, and securing the latter with one or more series of Lembert-Czerny sutures. In this way serous apposition is obtained without rolling in the entire thickness of the edge of the bowel, as in the ordinary method, and the projection of the inverted edges into the intestinal lumen and consequent danger of obstruction is avoided, for when the sero-muscular flaps are folded up against each other they stand outside around the line of suture like a ruff, instead of projecting inside of the bowel like a diaphragm. Dr. Kummer's experiments were confined to dogs.—*Archiv für klinische Chirurgie.*

Fœtal Head Retained Over Three Months in the Uterus.—Dr. Loisnel describes the following case which came under his observation: In November of last year, Dr. Notto was called to attend a woman who had felt labor pains at term three months before. She was III-para, her previous labors resulting in spontaneous delivery. The doctor attempted turning, and failing, amputated the leg. On the day following he cut off the other leg. Next day he decapitated and removed the trunk and arms. Antiseptic injections were prescribed, but, through ignorance of the patient, were not given. The woman resumed her work, but was annoyed by the lochia continuing longer than usual. The doctor found a vesico-uterine fistula and a solid body occupying the uterus. He extracted a piece of maxilla by the aid of forceps. The patient was then admitted to a hospital. The os was dilated and the fœtal skull removed in pieces. There had been up to this time no signs of septicæmia. Afterward there was an occasional rise of temperature during recovery. The vesico-uterine fistula closed, but a communication established itself between the rectum and genital tract. Dr. Hergott had once extracted the placenta from a woman who had been delivered seven months previously. There had been no septic symptoms. In the discussion, Professor Tarnier remarked that some women resisted septic infection, and others recovered from it. Sloughing of the whole bladder did not always prove fatal. He had seen recovery after diffuse abscesses and suppuration of both eyeballs. Drs. Notta and Loisnel had, in extracting the head piecemeal, done the best possible thing, considering that they had not the choice of many instruments.—*University Medical Magazine.*

Idiopathic Pre-vesical Cellulitis.—Twenty-three cases of this affection were studied by Dr. Englisch, of Vienna. In addition to this he observed seven cases in his own experience (*The Annals of Surgery*). The disease occurs most frequently in males, and at ages ranging from twenty-five to thirty years. The origin of the affection, in all probability, depends upon infection, and it is more than likely that scrofula or tuberculosis plays an important rôle in its etiology. The symptoms may be divided into two groups, corresponding to two stages of the affection. It begins with symptoms which are not at all referable to the pre-vesical space, including constipation, subsequent diarrhœa, urgent gastric symptoms, etc. Severe intra-abdominal disturbance is suggested by the symptoms. Between the second and twelfth day localized symptoms arise, such as pain and the characteristic tumor. The latter suggests by its appearance an overfilled bladder. It rises from below upward, is sharply circumscribed, but differs in shape from the bladder by presenting a triangle with its base uppermost, and the point of which disappears behind the symphisis pubis. The most certain method of establishing the character of the tumor, however, is by the use of the catheter. Participation of the bladder may occur secondarily, however, this leading to retention in some instances. The inflammatory process may spread from the pre-vesical space in all directions, reaching to the thigh, extending with the pelvis, and may terminate in resolution or suppuration. The latter termination is not so frequent as is generally supposed. When it does occur and passes unrecognized, rupture of the abscess cavity may occur into the vagina, urethra, bladder, peritoneal cavity, or colon. Occasionally a chronic form of the affection is observed. In these instances the premonitory or preliminary symptoms are absent, and the appearance of a tumor with or without retention leads the patient to seek medical aid. The prognosis of both the acute and chronic forms is not so unfavorable as previous writers have led the profession to suppose.

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THE TREATMENT OF NON-MEMBRANOUS STENOSIS OF THE LARYNX IN THE ADULT BY O'DWYER'S METHOD OF INTUBATION, WITH REPORT OF FIVE CASES.[1]

BY W. K. SIMPSON, M.D.,

NEW YORK.

FELLOW AMERICAN LARYNGOLOGICAL ASSOCIATION.

THE great success that has attended Dr. O'Dwyer's operation of intubation for the relief of croup in children, has been the means of opening a large field for its employment in the treatment of those cases of non-membranous stenosis of the larynx, acute and chronic, in which for its relief or cure a certain amount of dilatation is necessary. So strongly impressed is Dr. O'Dwyer himself with its utility in chronic laryngeal stenosis, that he says, in an article in the *New York Medical Journal*, March 10, 1888, "Had intubation of the larynx proved a complete failure in the treatment of croup, I should still feel amply repaid for the time and expense consumed in developing it, for I believe that it offers the most rational and practical method yet devised for the dilatation of chronic stricture of the glottis." Subsequent results have, in my experience, substantiated Dr. O'Dwyer's belief.

The two principal objections to all former methods of overcoming laryngeal stricture, have been: first, the requisite preliminary tracheotomy or laryngotomy, and secondly, the necessity of oft-repeated short attempts at dilatation, on the supposition that the larynx was intolerant to long-continued pressure. Intubation, however, when successfully employed does away with both these objections, and by its means we are able to secure constant intra-laryngeal pressure for an indefinite period. This fact of laryngeal toleration was forcibly shown in one of the cases reported by Dr. O'Dwyer in the above-mentioned article, wherein the patient wore the tube without any inconvenience for the space of ten months. The importance of successfully combating these two objections is, I think, at once very evident, and any step toward that end will be recognized as a great advance in the treatment of these cases.

The older instruments and methods of laryngeal dilatation, including those of Schroeter, McKenzie, Navratil, Whistler, and others, are so well known that I will not attempt any further description of them.

The following classification of the causes of laryngeal stenosis, for the relief of which dilatation may be indicated, is taken from Dr. Asch's article in "Buck's Reference Handbook of the Medical Sciences:" "1. Cicatrices following the healing of ulcers, or the formation of bands abnormally uniting different parts of the larynx. This condition we find as a result of constitutional disease, syphilis, phthisis, glanders, after wounds of larynx, and following burns and scalds. 2. Inflammations, acute or chronic, the result of which is to produce obstruction of the larynx, croup, diphtheria, and œdema, perichondritis, and chronic stenosing inflammations, are included under this head. 3. Neoplasms, benign or malignant. 4. Neuroses causing spasm or paralysis. 5. Compression of the larynx from external causes.

"The principal symptoms to be overcome are those of obstructed respiration, and the most important objects to be attained in our treatment are to prevent, if possible, laryngotomy or tracheotomy in the first place, and to aid the patient in dispensing with the external cannula as soon as possible, when it has been found necessary to perform either of the above operations."

The following five cases have been under my own care, and sufficient time has elapsed to determine the effectiveness of the treatment. On account of the importance of the subject, and the limited experience on the part of individual observers, I have entered somewhat into detail, trusting thereby to be of aid to those who may have cases for similar treatment.

CASE I.—Mrs. S——, aged twenty-six, of very stout build, seen first by me April 10, 1888, at which time these notes begin. Patient gives strong probable specific and rheumatic history: no history of previous laryngeal trouble; present trouble dates back three and one-half months, when she was exposed to wet and cold during the greater portion of a night. A week following this exposure she became hoarse, which hoarseness has increased until the present time, she being now almost voiceless.

Dyspnœa began four weeks ago, has continued to increase, and at times attacks of suffocation have been very severe, worse at night, permitting of very little sleep, greatly increased by any exercise, and while at rest breathing and cough are of a stridulous and croupy nature. Deglutition difficult and exciting cough and dyspnœa.

Examination of larynx shows it to be almost entirely occluded by a large, irregular, grayish, granulating mass, having a cauliflower appearance, vocal cords entirely hidden from view, impossible to define attachments of the mass, though in its centre there is a small pin-head opening through which respiration is performed: the opening is so small that it seems well-nigh impossible to admit of any breathing at all. The patient was placed on large doses of iodide of potassium.

April 24th.—There is but slight change in the laryngeal appearance, and the dyspnœa has continued worse in the main, though at times there seems to be slight improvement. There is marked improvement in the other syphilitic symptoms of which she complained. For the last two days dyspnœa has been very severe, no sleep: and at 7.30 this A.M., she being in danger of imminent suffocation, I introduced, without difficulty, a medium-sized adult metal tube through laryngeal obstruction, previously using a solution of cocaine. The introduction was followed by immediate and positive relief from the dyspnœa, there being only a slight amount of cough produced by its passage. The string was removed five hours following, on account of its causing slight irritation.

The tube was removed three and one-half days following. During the time it was in the larynx it was unusually well tolerated, the patient being able to breathe and swallow perfectly. She suffered no inconvenience whatever, and came a distance of three and one-half miles to have the tube removed. On removal of the tube, the examination of the larynx revealed an entire change of appearance. There were no remains of the mass, saw some small reddish granulations in the inter-arytenoid space. The calibre of the larynx was practically normal, and the color was uniformly red, excepting the left vocal cord, which was of a glistening white color standing out in distinct relief to the adjacent reddened mucous membrane. There was a good return of the

[1] Accepted as a Candidate's thesis for membership in the American Laryngological Association.

voice. The following day the left vocal cord had assumed the reddened color of the rest of the laryngeal interior.

I think the absorption of the laryngeal mass was due to the pressure exerted by the tube, though possibly some of the mass may have become detached by the passage of the tube and subsequently coughed up; but diligent search failed to reveal this, which lends strength to the supposition of absorption by pressure. The remnants of the mass quickly disappeared, and up to the present time, April, 1893, after a lapse of five years, there has been no return of the growth, dyspnœa, or loss of voice. There has been some difference of opinion as to the character of the growth, though considered by most to be a species of condylomata.

In this case there can be no doubt as to the superiority of intubation over the external cutting operation, for if the latter had been performed it would have been impossible to tell how long the cannula would have had to remain before the removal or absorption of the growth, saying nothing about the possible danger and extra care it would have entailed.

Case II.—Mrs. L. S——, aged thirty-five, England; April 12, 1888. Family history of asthma; with exception of rheumatism, patient's health has always been good; miscarriage four months ago. Present illness began six months ago with cough, followed by hoarseness with impaired breathing at times; general health is becoming worse; no night-sweats; dyspnœa on exertion; cannot get any direct specific history.

Examination of chest reveals signs pointing strongly to phthisis, viz., dulness and prolonged high-pitched respiration over right apex, front and rear. Larynx: Epiglottis swollen and very pale, arytenoids clubbed, ary-epiglottic folds thickened, ventricular bands thickened, ulceration posteriorly extending below the right cord, severe pain in right side of larynx shooting up to right ear. The above record is taken from the hospital at which she had previously applied for treatment. She first consulted me in May, 1888, for relief from difficult breathing, which was very severe; at this time I discovered a cicatrix at junction of hard and soft palate, which led me to think the case to be one of a syphilitic nature rather than tubercular, which had been previously supposed. She was placed on anti-syphilitic treatment.

May 17, 1888.—During last two weeks dyspnœa has increased, preventing sleep for the last forty-eight hours, and at present she has violent paroxysms of difficult breathing, and there is apparent danger of momentary suffocation. Cough croupy, voice lost.

Examination of larynx reveals an almost entire obliteration of its lumen, it being filled with swollen, reddened mucous membrane, so that it is difficult to define the various parts. Some ulceration on right side posteriorly. I attempted to intubate with a medium-sized adult hard rubber tube, but failed to introduce it, and after two unsuccessful attempts Dr. O'Dwyer intubated for me, using a smaller sized tube and exerting a great deal of force. The relief from the extreme suffocation was immediate. The introduction of the tube was followed by excessive coughing, which continued more or less during the whole time the tube was in place. The string was removed at the end of six hours. The tube was removed at the end of the sixth day. During the time it was *in situ* it was not, on the whole, well borne, it producing more or less coughing, irritation, and some pain, with great distress at any attempt at deglutition, which last difficulty was in a measure overcome by rectal alimentation. Morphine was used to procure rest. Notwithstanding the above symptoms of irritation, great comfort was experienced by the relief from the suffocation.

Examination after the removal of the tube showed ample room for breathing, with nearly normal intra-laryngeal contour, some superficial erosions from pressure, some arytenoid swelling, and a generally reddened mucous membrane. The patient was again placed on larger doses of iodide of potassium, and in a few days the larynx resumed its natural appearance and functions, and continued so for a period of nine months. The subsequent history of this patient is very interesting, from the fact that she gained exceedingly in flesh and general health as long as she kept under the influence of the iodide of potassium, but as soon as she would discontinue it there would be signs of returning laryngeal trouble, to be dispelled again on resumption of the treatment. She took at times as high as one hundred and eighty grains daily.

Additional interest is also centred in this case on account of the subsequent demands for intubation, as follows: Nine months after the first intubation I was called upon to operate a second time, for a recurring laryngeal stenosis. For about two weeks preceding January 25, 1889, after two months abstinence from treatment, the patient complained of a cough with increasing difficulty in breathing. I had the opportunity of watching the cause of the stenosis, and repeated examinations revealed a gradual adduction of the vocal cords and fixation of the arytenoids, with no visible swelling or redness of the laryngeal mucous membrane, until January 25, 1889, there was complete obliteration of the chink with no attempt at abduction; entrance of air was almost an impossibility, and at noon of that day, during a moment of impending suffocation, I introduced a medium-sized adult hard rubber tube without any difficulty, and after a few moments of coughing she was greatly relieved from her suffocation. The string was removed at the end of one half-hour. The tube remained in four days, when it was coughed out and there was no necessity of returning it. The same irritation from the pressure of the tube was experienced as on the first instance, but on a much minor degree.

Examination of the larynx, two hours after the tube was coughed up, showed a good triangular space, with good motion of the vocal cords, the left moving better than the right, slight swelling of the arytenoids from pressure of tube, a general redness of the mucous membrane, some subglottic swelling anteriorly; breathing good, slight croupy cough. Patient was placed on thirty grains of the iodide, t.i.d.

January 30th.—The following day there was good motion of the left cord, but immobility of right vocal cord and arytenoid, with slight marginal ulceration at the inter-arytenoid space; there had been some little difficulty in breathing.

February 8th.—Fourteen days after removal of tube, examination reveals both vocal cords somewhat reddened, and with the same immobility of the right cord and arytenoid, the cord being nearly fixed in the medium line. Repeated examinations up to April, 1891, show this same fixation above noted, but entirely in the median line. The functions of the larynx are carried on by the left cord; the voice and breathing are good.

From January, 1889, to April, 1891 (two years and three months), patient was free from laryngeal obstruction, and had gained in flesh and general health. For about two weeks preceding April 13, 1891, patient again complained of laryngeal dyspnœa, and examination revealed a closure of the chink of the same nature as in the second instance; which was caused, however, this time by the left cord approaching the already immobile right cord without any attempt at abduction.

Intubation, 7.30 P.M., April 13, 1891, using a small-sized adult tube, which was retained three days, patient coughing it out; this gave relief, but I was quite certain that it would not be sufficient, so advised keeping up the dilatation. This had to be postponed for a month, the patient being compelled to leave town in the meantime. While out of town her attacks became very severe, and on her return, May 21st, I inserted second size conical-shaped tube, which was worn continually for a week. Examination after removal showed a generally reddened mucous membrane, and a pressure ulcer at upper anterior portion of larynx, at junction of cushion of epiglottis. The intercordal space was greatly enlarged, and there was good motion of the left cord, and slight motion of the right

cord. Up to the present time, April, 1893, there has been no return of laryngeal dyspnœa, notwithstanding the median position and immobility of the right cord. Voice remains good.

This is the first adult case of which I have any knowledge wherein intubation has been performed for recurring obstruction after a lapse of nine months and two years, respectively, and where the mechanical causes for the operation were apparently so widely different. The superiority of intubation over tracheotomy in this case cannot but be very apparent, especially at the second time of operating; for if tracheotomy had alone been relied on, the patient would probably have been compelled to wear the cannula all her life, as I do not think anything but the constant intra-laryngeal pressure of the intubating tube would have secured any permanent separation of the cords, unless we had resorted to their exsection. Numerous examinations of the chest have been made, but nothing in the way of pressure on the recurrent laryngeal nerves has been detected to account for the immobility of the cords at time of second operation. The physical signs described at the beginning of this history have disappeared.

It has always been a matter of speculation, to those who have examined this patient, in determining the exact nature of the lesion producing the laryngeal obstruction; but the concensus of opinion is, that it is due to exacerbations either of chronic syphilitic or rheumatic arthritis of arytenoid joints, with submucous thickening below the cords.

Case III. *Chronic Syphilitic Stenosis of the Larynx.*—Mrs. M——, aged forty-five years, Ireland; November 12, 1889. Gives well-marked previous history of syphilis. Four years ago first complained of painful sore throat localized in the larynx, mostly on left side, radiating to ears, pain noticeable in speaking, swallowing, and coughing; pain was quickly followed by hoarseness, with entire loss of voice at times. Difficult breathing began two years ago, during the greater part of which time it has been very severe, the paroxysms interfering with sleep to the extent that she became afraid to lie down at night for fear of suffocation, and for long periods was almost entirely bereft of sleep. While at rest breathing is very stridulous, with increase in severity on any exertion. For last two weeks has been unable to perform her ordinary housework. During last year has been under vigorous anti-syphilitic treatment with temporary amelioration of symptoms.

Examination of larynx reveals short stubby epiglottis with destruction of its free margin from the previous ulceration. Lumen of the larynx almost entirely obliterated by dense, indurated, and swollen mucous membrane, with intensely red color. The swelling seemed to be mostly confined to the arytenoids and ventricular bands; it was difficult to define the true vocal cords, and no subglottic view could be obtained. There is a small soft protruding mass seeming to arise from the left ventricular cavity, having appearance of fresh granulation-tissue. Phonatory motion of the larynx almost entirely absent, voice reduced to hoarse whisper.

I intubated November 12, 1889. A number of attempts were made with the medium-sized adult hard rubber tube, but sufficient force could not be exerted to pass it through the dense stricture. The smallest sized adult tube was then used, and by exerting considerable force I was able to insert it. An eight per cent. solution of cocaine was used before operating.

The relief from the difficult breathing was immediate, and after considerable coughing the breathing became noiseless, and remained so the greater part of the time the tube was in the larynx, which was eighteen days, without any indications for its removal.

The calibre of the tube was so small, and thinking it might become occluded with dry secretions, I left the string attached so the patient could have removed it in case of danger, but the string produced so much irritation that it had to be removed at the end of the second day. Swallowing caused considerable irritation while the string was in, but gradually she became able to swallow fluids and some solid foods with but very little trouble. There were paroxysms of coughing at various times. The patient slept well and bore the pressure of the tube with a minimum of inconvenience, being able to do her ordinary housework, and during the last three days the tube was *in situ* she assumed almost the entire care of a pneumonia patient in her household. She was kept under anti-syphilitic treatment, and steam inhalations of lime-water were used to prevent drying of the secretions in the tube. Numerous laryngoscopic examinations showed but very little swelling of the mucous membrane over the edges of the tube.

November 29, 1889, the patient becoming somewhat nervous, requested that the tube be removed, which was done with the aid of the mirror. In attempting its removal an unusual amount of force had to be used, showing how firmly this small tube was held in position. Immediate examination after withdrawal of the tube showed a reddish mucous membrane, no ulceration, there was a considerable increase in the calibre of the larynx, the parts were much better defined, and there was fair motion of the cords. Up to the present time, April, 1893, she has had no return of difficult breathing; her voice, however, still remains somewhat hoarse. This case shows in a marked degree the advantage of continued intra-laryngeal pressure over any other means of dilatation. It was my intention to insert a large tube after withdrawal of the first, one, but sickness in her family prevented.

Case IV. *Bilateral Paralysis of Abduction.*—Mrs. G——, aged twenty-six. I was called in consultation November 11, 1889 at 11 A.M., the patient having been seen first by her physician during the previous noon and night. Patient gives history of attacks of laryngeal dyspnœa of varying intensity for the last two years, attacks lasting from two to three days in their severity. During the same period she has had cough and constant loss of voice, speaking only in a whisper. The present attack has lasted for four days and nights, and is greater in severity than any previous attack. The condition in which I found the patient was one of coma, from which it was very difficult to arouse her. The night previous she had been given 7 minims of Magendie's solution of morphine with $\frac{1}{100}$ grain atropia to procure sleep, and notwithstanding this small amount of morphia it was concluded that it had been the cause of the present deep coma. Atropia, grain $\frac{1}{75}$, had been given in addition to counteract the action of the morphia, which it had done to a certain extent, producing some dilatation of the pupils and an increase in the respirations; but the narcotism was apparently not affected. There was marked dryness of the tongue, mouth, pharynx, and larynx. The patient was almost pulseless and her general condition was very extreme indeed. It was very difficult to inspect the larynx, but the view obtained revealed a dry and slightly reddened mucous membrane, some swelling of the false vocal cords, especially on the right side, and in addition a paralysis of abduction of the true cords, they being in close proximity in the median line; there was no motion of the larynx, and the current of air produced a flapping motion of the cords. It was decided to defer any operative interference until the patient should recover from her general narcosis.

At 3.30 P.M. of same day the patient had fully recovered from her general narcosis, and she then showed unmistakable signs of extreme laryngeal stenosis. I introduced the smallest-sized adult hard rubber tube without any difficulty, which afforded immediate relief from the embarrassed breathing; the string was left in with directions to withdraw the tube in case of its becoming blocked. She withdrew the tube at the end of nine hours, which had become somewhat occluded by a mucopurulent secretion, her condition being so weak that she could not clear it by coughing. I then introduced the medium-sized tube without any difficulty, producing

relief from the dyspnœa that had reappeared during the short interval the first tube had been out. This second tube was left in for twelve hours. About six hours after introduction of the second tube, the patient developed a sudden rise of temperature to 104°, with increased respirations to 60, pulse being still imperceptible; numerous coarse and fine râles were found over the posterior portion of the chest, quite generally distributed. Her condition continued to become worse, and at 3 P.M. of the same day she died, being just twenty-four hours after the first intubation. The tube being removed after death, it was found to be entirely clear. No autopsy could be obtained. The cause of death was probably heart failure in course of a beginning pneumonia, brought about by her inability to clear the lungs of the retained secretions. I am almost sure that if this patient could have been intubated in the early part of her attack, she would have recovered, but she had become so utterly exhausted that there was no recuperative power left. The hygienic surroundings of the patient were very poor, with scarcely any accommodations for providing her with proper treatment or care.

Case V. *Stenosis Following Fracture of the Larynx.*—Male patient, aged thirty-nine, rather tall and previously robust. First seen by me June 24, 1890, when he gave the following history: Three weeks previously he fell from a pile of lumber, distance about eight feet, striking his throat violently on a projecting wooden screw at the bottom of the pile. As nearly as I could make out, the screw penetrated the right thyro-hyoid membrane. After extracting the screw from his throat, he was taken to the hospital, suffering from increasing laryngeal dyspnœa. Within a half-hour from the time of the accident extensive emphysema of the neck and upper portion of the thorax had supervened, and an alarming laryngeal hemorrhage took place. Death from suffocation being imminent, a laryngotomy was performed. The laryngotomy tube was removed after having been worn for eight days. Breathing through the larynx being somewhat restored, he was sent to me for the restoration of his voice. A careful examination made at that time showed the following conditions: Voice reduced to a harsh whisper. Exteriorly there was a long median cicatrix of the laryngotomy wound, the anterior junction of the two thyroid wings was somewhat flattened, and there was a linear depression on the surface of the right thyroid cartilage. The right thyro-hyoid space was contracted and smaller than the left. Interiorly the epiglottis was rather small and pointed, very red, and with but slight upward motion. The right cornu of the hyoid bone was displaced and seen projecting toward the median line. The parts about the larynx were intensely reddened. There was a general irregular swelling of the whole of the interior of the larynx, the greater portion being, however, on the right side. The swelling and distortion so changed the natural contour that it was with great difficulty that the various parts could be individualized. The whole interior had the appearance of being shortened in its antero-posterior diameter. The right half, anterior to the arytenoid, seemed to be pushed obliquely forward so as to bisect the opposite side, leaving only the posterior left half in view. Protruding anteriorly below the left vocal cord, was a whitish glistening portion, which had the appearance of cartilage, the mucous membrane of which being on the stretch. This was evidently a projecting edge of the left thyroid. The lumen of the larynx was very much narrowed, leaving as a result of the above distortion only a small triangular opening in the posterior portion through which the patient breathed. There was absolute immobility of the right side of the larynx and very little motion of the left side, which little was limited to the posterior third. The breathing was fairly good while at rest, somewhat difficult on exercise; there was some cough, which was croupy in character. My prognosis as to recovery of voice was bad; as treatment I ordered ice externally to the larynx, and suggested intubation if breathing became embarrassed, which I thought most likely to occur.

The next note is November 10, 1890.

From June 24, 1890, to November 10, 1890 (four and one-half months), the voice and breathing have remained about the same, until five days ago, when he began to have frequent repeated severe attacks of laryngeal dyspnœa, croupy in character and much worse at night; these attacks have, however, become less frequent and distressing to-day, though there is a strong inspiratory stridor even while at rest. Laryngeal examination at this time reveals, in the main, the same general condition as above, but with some additional changes of an inflammatory nature. Both arytenoids are more swollen and somewhat œdematous and red. Interior of larynx very red except the mucous membrane over both ventricular bands, which is of a considerably paler color, and the mucous membrane has a thinned and stretched appearance, and there is a small ragged depending mass, well anterior, which occupies the position of the right vocal cord, and looks very much like a remnant of the vocal cord. This mass projects into the cavity of the larynx, assisting in the stenosis. Notwithstanding this inflammatory change the main cause of the stenosis seems to be the distorted sides of the thyroid. Ordered rest, and ice externally.

December 12, 1890 (one month later).—During the last month the inflammatory changes have somewhat abated and the breathing has become a little better while at rest, but still has attacks of laryngeal dyspnœa, especially after exertion. Feeling sure that no further improvement would occur, I decided to try the effect of continuous pressure by means of the O'Dwyer tube. Accordingly, December 12, 1890, five and one-half months after the accident, with the assistance of Dr. O'Dwyer, I intubated. Having thoroughly sprayed the larynx and surrounding parts with a four per cent. solution of cocaine, I attempted to introduce the second-size adult hard rubber tube, but after three attempts by myself and one by Dr. O'Dwyer, we were, with and without the aid of the laryngeal mirror, unable to force it through the stricture. I could push it partially through and the patient could breathe while I held the tube in position with my finger, but it would immediately rebound when my finger was removed, indicating in all probability that the tube would enter as far as the retaining swell only. I therefore used the smallest-sized adult tube, and with the aid of the mirror was successful with the first attempt. This was followed by some coughing and expectoration, and a great feeling of relief in breathing. For reasons of safety, on account of the smallness of the tube, I left the string attached. The tube was retained but an hour, the patient expelling it during a fit of coughing.

On the following day, at my office, sixteen hours after (December 13, 1890), taking advantage of the slight amount of dilatation produced the previous day, I introduced the second or middle-sized tube at first attempt, by aid of the mirror, using in this instance the conical-shaped, probe-pointed tube, with very little, if any, retaining swell. This tube was also an eighth of an inch larger at the neck. It is barely possible that this same conical tube could have been introduced the day previous at the first trial. The string giving but little trouble, much less than usual, was allowed to remain four days. The tube itself was remarkably well borne for six days, there was but slight cough, the patient swallowed fluids well through a glass tube in the Casselberry position, and there was marked relief from the difficult breathing.

On the fourth day a slight pressure slough appeared at the anterior edge of the head of the tube—this was dislodged by coughing—and there also appeared about this time a slight swelling of the arytenoids encircling the head of the tube.

On the sixth day the patient complained of some pain in swallowing, and some pain, by pressure, over the external portion of the larynx, and I removed the tube in the usual way by aid of the mirror. An immediate examination showed the parts to be very red, some swell-

ing of the arytenoids, and a much larger breathing-space There was a slight pressure slough well anterior, at the point of the greatest pressure of the tube. For a period of over thirteen months there has been no return of the difficult breathing. An examination made in February, 1892, shows the same general laryngeal deformity, though less in degree; the parts are much clearer in outline, much less inflammatory swelling, considerably less hyperæmia, and a much larger breathing-space than when first seen. The same immobility of the larynx remains, and the voice has become somewhat stronger, though by no means normal.

Desirous of producing further dilatation I intubated again, February 15, 1892, using the same conical-shaped tube. The question of intubating earlier in this and similar cases very pertinently arises, with the view of using the tube as an internal splint to prevent anchylosis of the distorted parts.

The last time (February 15, 1892) that I intubated the tube was allowed to remain in for one week. Up to present time, April, 1893, there has been no return of difficult breathing.

These five cases, though having for their relief the same urgent symptoms, demonstrate how varied may be the cause of the stenosis, and how well it may be overcome by resort to intubation. The shape of the tube used in adult intubation is the same as that used for the relief of croup in children. For general convenience, a set of three tubes will be found sufficient, viz., a small, medium, and large size. If any special form of stenosis has to be overcome wherein the ordinary-shaped tube cannot be used, it will be necessary to change the shape in accordance with the case in hand. The introducing and extracting instruments should be heavier and stouter than those used with the croup tubes, in order to gain more force in passing the different strictures. The tube may be either of hard rubber or metal: the metal tube being heavier, is advantageous sometimes in sinking lower down in the larynx and not rising up so far in the act of deglutition. The secretions are somewhat more liable to collect in metal tubes, though it is unusual for either to become obstructed sufficiently to necessitate removal. Though there is considerable difference in the weight between the metal and hard-rubber tubes, they seem to be about equally well tolerated. The technique of intubation in the adult is, in the main, the same as when done for croup in children, and where a minimum of force is to be exerted, and where the epiglottis can be well managed by the left forefinger, the operation is comparatively easy for those who have had any experience. On the other hand, where an extra amount of force is to be exerted, and where the epiglottis cannot be easily controlled, the operation becomes more difficult. We are apt to find this latter difficulty in very tall patients, and in those patients who have worn a tracheal cannula for a long while, rendering the larynx inactive. In my third case there was difficulty in managing the epiglottis, owing to its partial loss by previous ulceration.

Under certain circumstances where the entrance to the stricture is very small, or situated away from the median line, thus increasing the difficulty of inserting the tube, it may be well to try its introduction with the aid of the laryngeal mirror; but as soon as the tube enters the stricture the mirror will have to be quickly dropped and the forefinger of the mirror hand transferred to the head of the tube to exert the proper pressure, and to hold it in place while the introducing instrument is being withdrawn. The string should be allowed to remain until we are quite assured that the breathing is easier and there is no danger of the tube becoming occluded or coughed out. Especially is this necessary where the calibre of the tube is very small. If we leave the patient with the string attached, directions should be given to withdraw the tube by means of the string whenever the patient is unable to clear the tube by coughing, and there is danger of suffocation. They should be cautioned, however, not to act too hastily, else it might be difficult to replace the tube, especially if there had been difficulty in the first introduction. It is well to use medicated steam inhalations in order to prevent drying of secretions in the tube. Patients differ with respect to the amount of irritation produced by the tube, but as a rule it becomes better tolerated day by day. This difference of toleration is well shown by comparing Cases I. and II. The same may be said relative to deglutition, which, as in children, is the most difficult feature to overcome. This difficulty, in a measure, may be obviated by having the patient swallow while lying down, with the head lower than the rest of the body, or by leaning over a chair, or by resorting to an œsophageal tube or rectal enemata; which means should be dispensed with as soon as the patient can accustom himself to swallow in the usual way.

The removal of the tube may be accomplished with or without the aid of the laryngeal mirror. I think, however, the former way is preferable, as then we can see the point of the extractor enter the tube, thereby lessening the danger of lacerating the mucous membrane by ineffectual attempts at removal. It is needless to mention the importance of repeated preliminary laryngeal examinations in order to acquaint ourselves with the nature of the stenosis to be overcome; and while the tube is in the larynx examination should be made to see that its proper position is maintained, and that the opening does not become occluded by overlapping swollen mucous membrane. In some cases it may be impracticable, if not impossible, to resort to intubation as the sole means of overcoming the stenosis; if we find such to be the fact, the only alternative is to first perform the external operation with a view to intubation at some subsequent period.

In closing I wish to thank Dr. O'Dwyer for his extreme kindness and assistance, and to acknowledge the courtesy of Drs. A. Freeman, F. E. Miller, and C. H. Knight, of New York.

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THE GREAT THERAPEUTIC INFLUENCE OF THE SIZE OF THE DOSES.[1]

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It is passing strange that, up to the present time, the subject of difference in the therapeutic action of medicines in consequence of a change in the size of the dose given, has not received all the attention it deserves. Certain it is that mention is made of it in the text-books on materia medica and therapeutics, but that information is so meagre that it is soon, very soon, forgotten.

From the remotest periods in the history of our profession it was known that certain medicines, given in large doses, produce an entirely different effect to that which they give rise to when administered in small doses. An example of this truth is the hackneyed advice of Hippocrates to cure mental derangement: "Give to the patient," he said, "a potion made with the root of mandrake, in a great deal smaller dose than that required to upset his mind." A distinguished German physician, who was a good observer but deficient in logic, proposed, about a century ago, the adoption of the erroneous theory, improperly called law, of similia similibus curantur. He had observed the undisputed fact that many drugs entirely change their therapeutic action when given in much smaller dose than the usual one, and from that premise alone he generalized in a sweeping fashion. To day his followers having been attacked on both flanks, are now retrenched in the theory of "action and reaction." They say in substance that a drug produces in our system a certain physiological action, to which the vital forces are naturally opposed; that medicines in large doses increase "the action" of the poison they carry in

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themselves: and that nature, when it is not so harassed by a large quantity of poison, is better able to produce the consequent beneficial "reaction" with very minute doses of medicines acting in a similar manner as the disease.

If that theory is correct, there must undoubtedly be a middle point in which the action and the reaction of drugs are balanced, and their effects in that case must necessarily be nil. On both sides of this central point of two contrary forces that counterbalance each other, the medicinal dose will be beneficial in proportion to the distance it is from that imaginary fulcrum, which, logically carrying on the supposition, will give us as the final deduction that it is better not to administer any medicine whatever.

Doses being specific quantities in regard to one another, can only be known by experience, but their actual power, favorable or unfavorable, does not by any means always increase with the increase of the quantity, and it happens many times that the augmentation of the dose produces an entirely different result. Thus, for instance, the regular purgative dose of calomel, 5 to 10 grains, when increased twice or three times, does not produce a corresponding increase in its purging action, and on the contrary, may give rise to other very widely different effects.

The usual dose of a medicine is what gives to it its status in posology, notwithstanding the fact that it also produces quite another therapeutic effect when given in a different quantity. In ipecac we have a good example of this, for with ½ to 1 grain of it we soothe gastric irritation, or avail ourselves of it as an excellent diaphoretic expectorant, while its regular dose of 20 to 25 grains is what makes it known in posology as an emetic. In the same way a very large number of medicines completely change their therapeutic action with the change of the quantity given; but, as a general rule, large doses produce local effects, and small and frequently repeated ones systemic effects.

On this principle is founded the specific action of the great majority of those medicines we call alteratives, for they are generally administered in minute doses frequently repeated, and in that way their particles are slowly scattered throughout the whole organism, and the purpose of maintaining an impression upon the system is thus accomplished.

All practitioners know that a diseased condition of the body predisposes it against the therapeutic action of certain drugs; that climate modifies the habits, the tastes, the inclinations, and I dare say the ideas of the individual; that his idiosyncrasy, temperament, sex, age, the emotion under which he happens to be, or a suggestion timely made: and, lastly, the time at which the medicine is given, are all very important factors, almost as much so as the selection of the medicine to be administered. But do we give to the subject its deserving attention? In my humble opinion the great weight which the homœopaths attach to these things, more than what in reality they accomplish with their infinitesimal doses, is the true secret of the cures they undoubtedly sometimes realize.

I will give now a few practical instances in which differences in dose greatly modify the effects of medicines, and afterward speak of another matter intimately connected with the subject of this paper.

1. Calomel, in dose of $\frac{1}{10}$ of a grain every hour, produces as abundant an evacuation of the bowels in eight to ten hours, or perhaps sooner, as 5 to 10 grains in one single dose.

2. Aloes, in ¼ to 1 grain doses, is a valuable tonic.

3. Sulphuretted antimony, or, as it was anciently called, *panacea antimonialis*, is a good expectorant or diaphoretic in the dose of from ⅛ to ¾ grain, while in that of 1 to 5 grains it is an alterative.

4. Tartar emetic, in doses of from $\frac{1}{16}$ to $\frac{1}{6}$ of a grain, is much used as an expectorant and diaphoretic: in doses of from 1 to 2 grains we all know it is a powerful emetic; but what many physicians do not know is, that it is an antiphlogistic in doses of from 2 to 4 grains.

5. Sweet spirit of nitre, in 5 drop doses, is an excellent diaphoretic.

6. Sulphate of copper, in ¼ to 1 grain doses, is astringent and tonic.

7. Tincture of lobelia, in doses of 10 to 15 drops, is an efficient antispasmodic and expectorant in asthma, and 1 to 2 drachms of it is an equally beneficial emetic in croup and whooping cough.

8. Antimonial wine, in 5 to 10 drop doses, acts as an expectorant and diaphoretic, very useful in acute exanthematous diseases, articular rheumatism, and catarrhal affection of the respiratory organs; while in doses of 1 to 2 drachms it is a recognized emetic.

9. Rhubarb, in 2 to 4 grain doses, is a most valuable tonic in derangements of the digestive organs, especially the so-called "torpor of the liver:" yet in from 20 to 30 grain doses it is a purgative.

10. Magnesia, in 10 to 15 grain doses, is probably the best antacid; and in from 30 to 60 grain doses a purgative.

11. Oil of turpentine is a diuretic in 2 to 6 drops, a stimulant and diaphoretic in 8 to 15 drops, and in half a drachm to 2 drachms, a drastic and anthelmintic.

12. Sublimed sulphur, in 10 to 15 grains, is an alterative diaphoretic, and in from 1 to 2 drachms a purgative.

13. Chloride of sodium, or common table-salt, in 10 to 20 grain doses, is a tonic and alterative; in doses of from 1 to 2 drachms, an astringent and anthelmintic; and 1 to 2 ounces of it in 6 ounces of water makes it an emetic.

14. Sulphate of sodium in a large dose is a purge, and in very small and frequently repeated doses it is a diuretic.

15. Digitalis in a large dose is an emeto-cathartic, and in minute doses given at short intervals it is a diuretic.

16. The well-known arsenical solution of Fowler, in ½ to 1 drop doses every half-hour, during three or four consecutive hours, will relieve the vomiting following a debauch; and it is also of great usefulness, in such small amounts, in the uncontrollable vomiting of pregnancy.

17. No physician doubts the efficacy of the fluid extract of ergot in excessive menstruation; but what surely is just as true, although it may appear contradictory, is the great improvement obtained in cases of amenorrhœa not dependent on anæmia, with drop doses of the same preparation every two or three hours at the time of the menses.

18. It cannot be denied that ammonia, alcohol, and ether, given in moderate amount, excite cardiac action, and in large quantity they arrest the heart in diastole.

19. Very minute quantities of atropia render the pulse slow, and large quantities make it exceedingly rapid.

20. Moderate doses of digitalis slow the pulse, while large ones quicken it.

The circumstances which modify the effect of remedies relate both to the remedies themselves and to the particular human organism into which they enter. The vegetable alkaloids are usually rapidly absorbed and rapidly eliminated. On the other hand, those vegetable remedies which are dependent for their activity upon glucosides, commonly yield their active principles slowly to absorption and elimination. Mineral substances accumulate in the body much more easily than those belonging to the vegetable kingdom. A knowledge of the relation between absorption and elimination of a remedy is therefore of great importance in practical medicine.

The medicinal properties of drugs are also modified by the climate and soil in which they grow, their cultivation, age, and the season of the year at which they are gathered; just the same as the circumstances already mentioned modify the state of the human organism in a favorable or unfavorable manner.

I could give numerous additional proofs of the great therapeutic influence of the size of the doses, but I consider I have already presented enough evidence, and will close, as I stated before, by saying a few words on two

other points, intimately associated with the subject of this paper:

1st. All the parts of very many medicinal plants do not possess the same therapeutic properties. We have familiar examples of this fact in the leaves and seeds of Ricinus communis, for the former are emollient and the latter drastic, and even toxic; all the parts of Papaver somniferum contain opium, except the seeds, which are completely destitute of narcotic properties, and are used as food in some countries, as Switzerland and Germany; the flowers of Viola odorata are expectorant and demulcent, and its roots are emetic.

2d. There are several medicinal plants belonging to the same natural order, the same species, and even the same family, whose therapeutic properties are entirely different; and there are other medicinal plants which, in spite of being unequal in structure, possess analogous, and even exactly the same, therapeutic properties.

To the first of these two classes of plants belong the roots and leaves of Daucus carota, which are succulent and nutritive, while the same parts of Conium maculatum are very poisonous, notwithstanding the fact that both plants appertain to the same natural order of Umbelliferæ. The Cucumis melo and the Cucumis colocynthis, of so very widely different medicinal properties, belong to the Cucurbitaceæ; and if we are to believe implicitly what such an eminent authority as De Candolle tells us, who speaks of the Gramineæ as "la famille la plus naturelle," in which we find more than one exception to the general rule, I would not hesitate at all in affirming my proposition. In the Solanaceæ family we meet also several exceptions of the same kind; for instance, in the fruit of Capsicum annum, and in Atropa belladonna.

To the second class of vegetable medicinal products, that is, to those plants which, differing completely in structure, are endowed with analogous therapeutic properties, belongs turpentine, which is obtained from Pistacia terebinthus, natural order Terebinthaceæ; and another medicinal substance, whose properties are so identical to those of turpentine that it is known by the same name, is obtained from the genuses Pinus, Larix, and Abies, which belong to the Coniferæ. Balsam of copaiba, which resembles turpentine in many of its properties, and whose constituents are even isomeric with it, is obtained from the Leguminosæ family, whose structure is entirely different from the Terebinthaceæ and the Coniferæ. The name "hellebore" is given to two medicinal plants altogether different — Helleborus niger and Veratrum album—owing in all probability to the similarity of their therapeutic effects; and yet the first is a dicotyledon belonging to the Ranunculaceæ, and the second is a monocotyledon pertaining to the Melanthaceæ.

All these are sufficient examples to prove that, in the present state of medical science and its auxiliaries, the common teachings of materia medica and therapeutics do not afford ample security for the practitioner to judge with accuracy in each individual case of the therapeutic effects of drugs, nor of the size of the dose to be administered, and that his only reliable guide is his clinical experience.

We often hear of a practitioner who obtains most excellent results with a particular medicine in the treatment of a certain disease; we try the same medicine in that special disease and fail to get good results: our immediate deduction is that that practitioner has greatly exaggerated the beneficial action of the medicine, or perhaps did not tell the truth. Why should we not better inquire into the many little details that go a great length to help the action of medicines?

194 West Tenth Street.

Bromide of Strontium in Vomiting.—Coronedi, according to the *Repertoire de Pharmacie*, October 10, 1892, has used this agent with great success for the relief of vomiting from various causes. Fifteen grains, before meals, relieves nausea more or less promptly; and this dose—thirty or forty-five grains a day—is efficacious even in the obstinate vomiting of pregnancy.

NEW QUESTIONS IN MENTAL CHRONOMETRY.

By J. MARK BALDWIN, Ph.D.,

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In view of the references made by Professor Titchener, in his recent article in the Medical Record for March 4, 1893, it may be of interest to its readers to have a further note on the subject of the "Psychology of Reaction-time." The distinction between "sensory" and "motor" reaction was first made by Lange,[1] working in Wundt's laboratory; and it seemed from his results, and others immediately following him,[2] that the distinction was sound. Indeed it appears reasonable from the point of view of general psychological theory. All we know of the attention, as well as what we know of the relation of attention to voluntary movement, makes it seem likely that a reaction would be shorter if the attention be concentrated beforehand on the proposed movement. Recent researches, however, have given results which have tended to make a reconsideration of the question necessary; indeed some experiments have been so negative that such careful investigators of Professor Cattell[3] are disposed to throw over the distinction altogether.

I am sure that this would be to go too far. I have endeavored incidentally, in an article now in print for the July issue of the *Philosophical Review*,[4] to account for the conflicting results of experiment in this field by borrowing from the medical psychologists the results of their brilliant analysis of the speech function, on the basis of its pathology. The recognition of the great forms of aphasia—*i.e.*, sensory and motor—and the corresponding recognition of the existence of visual, auditory, and motor speech types, gives a strong presumption that the distinction between sensory and motor in the voluntary movements of speech and writing applies as well to voluntary movements of all kinds; that is, to all movements which have been learned by attention and effort. This means that a man is an "auditive," or a "visual," or a "motor" in his voluntary movements generally. His attention is trained by habit, education, etc., more upon one class of images than upon others, his mind fills up more easily with images of this class, and his mental processes and voluntary reactions proceed by preference along these channels of easiest function.

If this be true it is evident that a man's reaction-time will show the influence of his memory type. The motor-reaction we should expect to be most abbreviated in the man of the motor type; and less abbreviated, or not so at all, in the "visual" or "auditory" man. And experimental results must perforce show extraordinary variations as long as these typical varieties are not taken account of. We are accordingly, I think, a long way off from any such exact statement of absolute difference between sensory and motor reaction-time as Wundt makes in his last edition.[5]

The position is in direct accord with Pick's[6] interesting argument for the central seat of the motor disturbances which result, in certain cases of anæsthesia, from the closure of the eyes. It is really the attention which is disturbed in these cases, through the loss of its usual support from the sense of sight, it is not a loss of "muscle sense" only.

In addition—and this I wish to bring to the attention of the medical men who busy themselves with aphasia—the indications of memory "type" afforded by reaction-times ought to support the analysis of speech from aphasic cases (that is, when we psychologists have gone as far on our side as the physicians have on theirs!). A man with a relatively short "sensory reaction" would be of the sen-

[1] Philosophische Studien, iv., p. 479.
[2] Martius, ibid., vi., p. 167; Titchener, ibid., viii., p. 138.
[3] Philosophische Studien, viii., p. 403.
[4] Article entitled "Internal Speech and Song."
[5] Physiologische Psychologie, 3 ed., ii., p. 291 ff.
[6] Zeitschrift für Psychologie, etc., iv., p. 101 ff.

sory type, and would be peculiarly liable to sensory forms of aphasia—loss of speech through word-blindness, word-deafness, etc., and to paraphesia and paragraphia. On the other hand, one whose "motor" reaction-time is very short, would be liable to loss of speech from interference with his muscular memories. For example, I think it is likely that patients like those of Grosbey, Bastion, Charcot, and others, who could read or speak only by tracing the letters with the hand, were probably of the motor type and would have given relatively short motor reactions. I am not sure that such a correspondence could be made out in actual cases of aphasia, but it is an interesting deduction, and possibly medical men may find opportunity of testing it with the aid of a portable instrument such as the *chronomètre d'Arsonval*.

In my laboratory a research is now nearing completion which has given experimental ground for this main position. I have three practised reaction-time subjects who illustrate three distinct types. In one the motor (hand) reaction is shorter than the sensory (hearing); in the second, the two kinds are about equal; while in the third (a musician) the sensory is about one-quarter shorter than the motor.[1] I hope, before publishing the results in detail, to bring other tests to bear for the determination of the relative influence of sight, sound, and muscle-sense respectively in the reactions of the different types. One of these tests has gone far enough, however, to enable me to make a new distinction in the matter of motor reactions, *i.e.*, a distinction between what may be called visual motor reaction (motor attention with sight of the organ employed to react—involving the optische Bewegungsbilde of the Germans) and kinæsthetic motor reaction (motor attention without sight of the reacting organ). In my experiments, so far, the "visual motor" reaction is shorter than the "kinæsthetic motor," except in subjects of the extreme motor type; in these latter the "kinæsthetic motor" is shorter, the visual motor-time approximating the sensory reaction-time. This research was suggested by the cases already referred to of loss of voluntary movement through closure of the eyes, taken with the further observation that even though the eyes are open in these cases, voluntary movement is still impossible until the gaze of the patient be directed to the particular limb in question. The distinction between "visual motor" and "kinæsthetic motor" reaction-time is important, I think, from other points of view as well.

TRANSPOSITION OF THE VISCERAL ORGANS.

By JOSEPH COLLINS, M.D.,

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Entire transposition of the visceral organs is extremely rare, but a sufficient number of cases have been reported to show that this condition is not at all inconsistent with good health and longevity. Although it is not so uncommon to find evidence of transposition of the organs during the life of the patient, it is not often that we have the opportunity of following up such a discovery and corroborating the diagnosis by an autopsy. The following history is interesting in illustrating such a condition. It is reported for the purpose of showing the anatomical anomaly, and not with the intention of dwelling on the clinical picture presented by the patient in his last illness.

The patient, a gentleman aged sixty-one at the time of his death, was to all appearances physically and mentally equipped to equal the best. In his youth and early manhood he was particularly fond of indulging in athletic exercises and tests of strength and endurance. Illness was to him, until later years, an unknown quantity, and then more or less the natural consequence of the gratification of an appetite for stimulants. In the autumn of 1891 he suffered from a very harassing cough and general weakness, without having any definite pulmonary symptoms. Off and on he was able to follow his occupation of newspaper work, and by spring he thought he was nearly recovered. In April, however, he had a peculiarly distressing attack, and Dr. C. S. Elebash, who was then for the first time called to see him, requested me to see him in consultation, and later on to take charge of the case. At this particular time he had been ill for a few days but had no well-marked or concentrated symptoms; some headache, particularly distressing in the evening and early morning, and sleeplessness were the things that bothered him the most. His family informed us, however, that at times they were not recognized, and he seemed to be slightly flighty and delirious occasionally. At that time, and later, he was clear-minded and rational. His temperature was considerably elevated, 103° F., and he said that as a general rule he had chilly feelings in the afternoon. On making a physical examination I was very much surprised to find the apex of the heart in a corresponding place on the right side to where it is normally on the left. In order to convince myself that the heart was misplaced, the cardiac dulness was outlined on the chest-walls, and it was found to be analogous to the ordinary heart dulness on the left. Before communicating these discoveries to the patient I satisfied myself that the liver was likewise transposed to the right side. Then, on speaking of the matter, he informed me that more than thirty-five years before, Sir William McCormack, an acquaintance and townsman of his, had made the discovery and had always manifested a great interest in him. Although he was aware that his anatomical relations were all at variance, when measured by the standard of the typical man, he could not see that in all his years it had made the merest particle of difference with him, as he had been particularly strong and healthy. The general appearance of the patient, particularly the color of the skin, and condition of the pupils, led to an examination of the urine and a very small amount of albumin was found, and later a few coarsely granular epithelial casts. For a few days his symptoms became more severe, but they were simply those pointing to the presence of some toxic matter in the blood, and in this case the result of a chronic nephritis, upon which had been engrafted a moderately acute attack, which, however, subsided after a week or two under proper treatment, and in a fortnight he was up and about, feeling first-rate and able to go to business. After two or three weeks he experienced another attack, which was of the same duration, and likewise terminated favorably, leaving him somewhat weaker, however, than before. One day, about a week after he had arisen from the last attack, he walked to my office, a distance of half a mile, at noon-time, with the thermometer indicating a temperature of upward of 90° F., and with a degree of humidity almost unbearable, in fact the hottest day of the season. He was so completely prostrated when he was taken home that he took to his bed at once. His temperature almost immediately went up to 105° F., and remained there or at a higher point, except when temporarily reduced by means of cold baths and packs, until a short time before his death, which resulted from cerebral œdema and coincident œdema of the lungs three days after the exposure to the intense heat already mentioned. Mental apathy and failure of the vital functions went hand in hand with the development of the cerebral œdema.

The condition of his urine for the immediate days preceding his death did not seem to be materially changed as regards the amount of albumin and casts, nor could dissolution be said to be due to the nephritis except as a contributing factor. The conditions found on post mortem were as follows:

Autopsy (twenty-four hours after death).—General appearance that of a strong, well-built man, but considerably emaciated. Large inguinal hernia on right side. No œdema of extremities. Considerable subcutaneous adipose tissue. Two large hemorrhagic spots of old duration, one inch in diameter in the transverse meso-colon. Peritoneum otherwise normal. Cæcum is found in left iliac fossa, vermiform appendix two and one-half inches in length and in normal relation to it. Ascending colon passes upward on the left side to

[1] Cattell reports a similar case, loc. cit., p. 406.

the left hypochondriac region. The transverse colon has a very long meso-colon which permits of its descent at least four inches below the umbilicus. Descending colon passes down on the right and terminates in the sigmoid flexure, which is situated in the right iliac fossa, the last part, however, before terminating in the rectum crosses to the left side, the rectum therefore being in its normal position.

Fundus of stomach found in right hypochondriac region, the body extending across into the epigastric, the pyloric extremity being found at the junction of the left hypochondriac and the epigastric region. The ascending duodenum is two inches in length, is almost entirely surrounded with peritoneum and passes directly to the left; descending portion two and one-half inches in length, covered on anterior surface only with peritoneum and passes directly downward; transverse portion three inches in length, retro-peritoneal.

Liver extends to the lower border of the ribs and occupies the entire left hypochondrium; the left lobe is in the epigastric region extending to the right hypochondriac region. Spleen is found in the right hypochondriac region and is adherent to the ribs. Pleura on left side not adherent; on right side two old adhesions at the apex and anteriorly. Heart situated on the right side, the apex reaching the fifth intercostal space and three inches to the right of the median line.

Left lung has three lobes, right lung has two. The heart is covered with a thick layer of fat and is entirely bloodless; rather small, and the musculature slightly flabby, valvular mechanism normal, a few subendocardial extravasations, orifices of the coronary arteries normally situated, no atheromatous changes in the aorta. The inherent relationship of the heart itself is changed, insomuch as the right ventricle is in front and to the left, and the left ventricle lies to the right and posterior. That is, it is simply reversed. The vessels of the aorta are given off normally, as are the pulmonary veins. The lungs are moderately emphysematous anteriorly, and the right is very œdematous. Small calcareous and fibrous nodules are found in the right apex. A small bony growth, such as is sometimes seen on the autopsy-table, was found on the inferior surface of the left lung. It measured about an inch in diameter. The spleen is extraordinarily large, measuring approximately 17½ ctm. in length, 14 ctm. in diameter, and 7 ctm. thick, it is covered with adhesions, dark red in color and fairly consistent. A small supernumerary spleen of about two inches in length, and of characteristic spleen tissue is found on the inferior surface.

Pancreas normal in size and appearance; the head lies in the curvature of the duodenum to the left of the median line, the tail in the right hypochondriac region in contact with the spleen. Left kidney of normal size, capsule very adherent, cortex nearly normal in thickness, pale in color, soft in consistency, and the markings of the kidney very indistinct. The same applies to the right. Liver normal in size and consistency and contains a considerable amount of fat. Lower portion of the ileum on the inner surface thickly coated with mucus. Peyer's patches and the solitary follicles not enlarged. Enlarged and pigmented glands in the posterior mediastinum. Stomach normal. Inguinal canal on right side large, patent, and readily admits two fingers into the scrotum; no intestines in the sac. On the left side the canal is closed. Bladder and ureters normal. The cranium and spinal canal were not opened. Microscopical examination of the spleen showed a simple hyperplasia, and the kidneys were found to be in a state of chronic diffuse nephritis with well-marked changes in the epithelium of Bowman's capsule and the tubules.

The Way they do it in Philadelphia.—Report states that nearly the whole faculty of Jefferson Medical College is in Harrisburg, seeking to obtain an appropriation of $110,000 from the Legislature for the hospital. The College is a good one, and we hope they will succeed.

IDIOPATHIC GANGRENOUS GINGIVITIS IN ADULTS.[1]

By GEORGE A. RICHARDS, M.D.,

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Case I.—Man, chef, aged fifty; October, 1892. Had had severe attack of rheumatism, which had lasted between two and three weeks. For about a week before he came under observation he had been feeling much better, but somewhat weak, though he noticed his mouth was sore, and there was marked salivation. His appetite was poor, and general condition one of prostration. Good history unobtainable.

On approaching patient the putrefactive odor was most marked. He was much prostrated, face pale and somewhat swollen.

Examination of mouth showed the entire alveolar portion of lower jaw to be in sloughy, pultaceous condition; the tissues being of a dark-brown or black color. The gums had fallen away from the teeth, and portions of the alveolar process of the inferior maxilla were visible. The teeth were loose. The tissues at the gingivo-buccal reflection were swollen and infiltrated, though there was as yet no evidence of involvement of the skin and subcutaneous tissues. The alveolar process of the upper jaw was involved in the same way, but not so extensively. All parts were bathed in a sanious, very fetid discharge, containing shreds of necrotic tissue.

The tongue was dry, brown, and cracked; pulse rapid and very feeble; and patient was in a condition of low, muttering delirium—in fact in an almost moribund condition.

A strong deodorizing and antiseptic solution of Listerine, chlorate of potassium, and carbolic acid, as a mouth-wash was ordered, and he was given most vigorous stimulation. But in spite of treatment, patient steadily failed and died twenty hours later.

In this case mercurial or other metallic poisoning was naturally the first thought; but on further investigation no evidence of the administration of any such drug was found. He had been taking small doses of iodide of potassium in a tonic mixture.

Case II.—Male, thirty-four years of age; lawyer; April, 1892. Had a chancre fifteen years ago, but never any secondary symptoms, and was always perfectly well until two weeks ago, when he had a sore throat—apparently tonsillitis—not very severe, however. Feeling better about a week ago, he took a Turkish bath, and thinks he caught cold, for about five or six days ago his mouth became very sore, and a day or two later a lump began to form below the angle of the jaw. His appetite has been poor, and he feels very weak.

Physical Examination.—Patient in a condition of marked prostration, emaciated, skin of an ashy pallor. On approaching him the extremely fetid breath is at once noticed. On the right side of hard palate, just inside the alveolar process and opposite the molar teeth, is a sloughy, gangrenous spot—this also extends externally to the gingivo-buccal reflection. There is a similar spot on each side of the molars of the lower jaw.

T., 102.2° F.; R., 24; P., 110. Urine is acid, specific gravity 1.020, contains a trace of albumin and many casts. Ordered a mouth-wash of peroxide of hydrogen.

Within a short time his breathing became labored, moist râles were heard all over chest, and low down on the left side posteriorly: there was dulness and absence of respiratory murmur. Patient failed steadily, and died thirty hours later.

While cases of noma affecting children have been observed and reported in large numbers, medical literature contains comparatively few reported cases of gangrenous inflammation affecting the mouths of adults; and idiopathic gangrenous inflammations involving primarily the gums of adults are so rare that Masterman, who reports two cases, is in doubt as to the name to give the

[1] Read before the Section of Laryngology and Rhinology of the Academy of Medicine, February 22, 1893.

process. From its close resemblance to gangrene elsewhere, and the fact that gangrene is almost invariably the result of inflammatory action, it has seemed advisable to use a term expressing the pathological character of the trouble rather than to commit ourselves to one expressing a conjecture as to its etiology—that being practically unknown.

Lawson, Morse, Ranke, Babes, Schimmelbusch, and others, have investigated the subject bacteriologically, and have found many different kinds of micro-organisms in noma, though no specific organism has yet been found. We know that gangrene is favored by all causes which diminish either directly or indirectly the supply of arterial blood to a part; and the most natural supposition would seem to be that the circulation in a circumscribed area being slowed from some slight inflammation set up in the vicinity, a stasis of blood is caused. The resistance of the tissues being thus diminished, pathogenic bacteria find a fertile soil which is at once seized upon. By their growth and the further accumulation of inflammatory products, circulation is still more interfered with, and death of the tissues cut off from their proper blood-supply supervenes. On account of the intense reactionary inflammation set up at the edges of the necrosed patch, the gangrene tends to extend ever further. With conditions so favorable to the growth of bacteria as the mouth presents, the presence in the slough and at the edges of the inflammatory zone of immense numbers of micro-organisms, infiltrating to a greater or less extent the tissues, is not at all strange. Heat, moisture, and nourishment are all present in most favorable combination.

Any local inflammatory trouble may determine the affection, though it would seem necessary that the resistance of the tissues to morbid agents should be below par. In most of the cases reported, the patients appear to have had no previous illness, and were attacked while in apparent good health. In the cases herein reported, there was abundant reason to think that the patients' powers of resistance were much diminished; in the first case, by a severe attack of rheumatism, and in the second by an attack of tonsillitis following a winter of overwork.

Why in a place so subject to injuries as is the mouth, such inflammations should not occur more frequently in run-down patients, it is impossible to say.

In noma, bad hygiene seems to be a powerful predisposing cause. In this affection such causative relation is conspicuous by its absence. For in none of the cases reported is it mentioned.

I cannot believe that in the case related by Masterman tea-handling had anything to do with the causation of the disease; though it is stated that handlers of Indian tea frequently have sore lips.

The disease may begin, as in a case reported by Godelier, with slight salivation, and for some days that may be the only symptom; or the first symptom noticed may be a swelling on or near the gums, as in the case reported by Berkley.

As a rule, when the patient comes under observation, examination of the mouth shows a characteristic grayish-white, or dark-brown, or black patch on or near the alveolar process of the superior or inferior maxilla. This is soft, friable, and bleeds readily on touching it, shreds of necrosed tissue may be partially detached, and continually come away in the abundant discharge, which is thin, sanious, sanguinolent, and of an intensely fetid odor. This odor is very characteristic and clings to everything the discharge touches.

Almost invariably the local symptoms are the ones which first strike the attention of the patient or his attendants. There is some fever attending this stage of the disease, though generally the temperature is not much elevated, the thermometer registering from 101° to 102.5° F. Headache, loss of appetite, and prostration are almost always present from the start. Though these may not appear for some time after the commencement of the disease, the prostration will invariably assume grave proportions as the case progresses, a prostration out of all relation apparently to the extent of the lesion. Hemorrhages occasionally occur during the course of the disease, but are rarely of any severity, though they may be large enough to endanger life, as in the case reported by Byrd, where ligature of the common carotid artery was done. The skin of the patient assumes an ashy-gray or yellowish color, and the appearance is typical of septic infection. As the process extends, the skin in the neighborhood of the gangrenous patch becomes swollen, œdematous, and very hard to the touch. In the centre of this area of infiltration a small dark-red or brown spot appears, and in a very short time perforation of the cheek or lip occurs. This perforative process is sometimes exceedingly rapid, a slough as large as a silver quarter-dollar coming away in from twelve to twenty-four hours. During this destructive process the patient suffers but little pain, and the surrounding parts are comparatively insensitive to pressure. Hemorrhage rarely, if ever, occurs now, as the blood-vessels seem to be blocked for some distance around the zone of necrosis and inflammation. In the worst cases, the entire side of the face, extending to or even beyond the nose, and from the eye to below the lower jaw, may slough before the powers of life give way and death happily relieves the patient.[1]

In some cases the destructive process is much slower, and the patient dies before such frightful disfigurement occurs. The condition of the patient is, however, not so distressing to himself as to his friends, as he generally passes into a state of low-muttering delirium or coma, though occasionally intelligence persists to within a short period before death.

During the course of the disease vomiting may repeatedly occur, and the patient may be seized with a severe attack of diarrhœa; neither vomited matter nor stools containing blood, as a rule.

The two cases which have come under my observation have been so singularly like noma in aspect and course that I cannot but believe them to be the same generically, though it is difficult to explain why they differ in so many essential points, unless it be due to the difference in the character of the tissues in children and adults.

The deductions to which Masterman has come voice so well the conclusions to which I had arrived, that it is well worth while to quote them:

"The process is very analogous to cancrum oris; but (1) that disease is almost confined to young children; these patients were mature adults. (2) In children, the disease usually occurs after extreme debility, want of food, etc., or follows a specific fever; these patients were strong, healthy men; the only precursor was a 'cold,' which certainly in the latter case was of no especial severity. (3) Cancrum oris usually begins in the inner side of the cheek, and, according to Fagge, always in the submucous tissue. If it begins, as it does rarely, in the gums, it begins as an ulcer. In these cases, it began in the gums, and apparently as a general inflammation of the mucous surface. (4) In cancrum oris the necrosis spreads from mucous surface to skin, and only in severe cases, after extensive necrosis of the external structures, are the bones necrosed. Here the gangrenous process spread from mucous membrane to bone, and then distinctly later to skin. (5) Lastly, if we are to take the whole period of the two patients' illnesses, about three months in Case I., and about six weeks in Case II., we find they were much longer than the ordinary cancrum oris of children."

Of nine cases of this affection only one recovered; thus the mortality is greater than that of noma in children, in whom it has been estimated at seventy-five per cent.

Gangrenous gingivitis resembles scurvy in some respects, yet presents an entirely individual and characteristic ensemble. Salt meats, lack of fresh vegetables, and bad hygiene are necessary for the development of scurvy. In the cases here consulted, bad hygiene has

[1] While the process extends, the teeth, losing the support of the soft tissues, drop out one by one; and if the patient live long enough, portions of bone separate from the superior or inferior maxilla.

not been once noted, and it is distinctly stated in several reports that food and manner of living were good. The chronic articular pains and œdema of scurvy, as well as the effusions into the serous cavities, muscles, and joints, are in no one instance recorded. In a few cases of gangrenous gingivitis, cutaneous ecchymoses have been noticed. Moreover, scurvy is unaccompanied by fever in uncomplicated cases, and the buccal lesions are entirely different. Another, and a most striking, difference is the much less fatal character of the latter disease.

Though bearing some resemblance to purpura, it differs greatly in the absolute lack of any hemorrhagic character; and no simple case of purpura is recorded which has proved fatal.

Believing, as I do, that the gangrene is a result rather than a cause, the most natural corollary would seem to be that the intense prostration—out of all proportion as we have seen to the extent of the lesion—is due to the absorption by the stomach or lungs of poisonous ptomaïnes, the result of the growth of bacteria. The situation of the mouth is most favorable to such absorption, and the course of the disease bears out consistently this hypothesis of septic poisoning, for it is distinctly septicæmic rather than pyæmic. We have none of the striking symptoms of the latter—neither repeated chills, irregular febrile movement, sweating, nor metastatic deposits in the various organs.

An intercurrent lobar pneumonia or broncho-pneumonia may hasten the death of the patient, but this is not necessarily of a septic character.

The treatment of the disease has been so very unsuccessful in the past, and so few cases in adults are reported from which to generalize, that it may be of benefit to look to the literature of noma in children for hints as to the proper method to adopt. In both noma in children and gangrenous gingivitis in adults, caustics have been faithfully used, with but little beneficial results. Nitrate of silver and nitrate of mercury, nitric acid, hydrochloric acid, iodine, Paquelin's cautery, have all been tried without success; for though nitrate of silver was used in the case reported by Berkley, the patient would probably have recovered under the simple supporting treatment given in addition. All powerful caustics are so depressing in themselves that a patient, already greatly prostrated, has one more straw added to the burden his failing powers have to carry; so, if used, great care must be taken to limit the application.

The greatest possible cleanliness is of the first moment, and any good antiseptic and deodorizing wash must be used frequently.

In view of the good results obtained in children by Llewellyn, Yates, and Rundle, by the use of a solution of bichloride of mercury, 1 to 480, to 1 to 1,000, carefully rubbed into the affected parts several times daily, and Macguire's success with bismuth, a combination of the two would probably prove valuable—rubbing and packing the bismuth into the necrosed area after each application of the mercurial salt. Bromine, as a powerful, penetrating antiseptic and escharotic, might be tried as a local application. The use of tr. ferri chloridi, ♏ xxx., every three hours, is recommended by all writers. But the main reliance must, after all, be placed on diet, stimulation, and nursing; good, nourishing food in abundance, and whiskey to any amount necessary.

The Kansas Way.—The following appears at the foot of a bill-head of a Kansas physician. It is unique, original, and pointed, and we presume effective: "A prompt settlement of this bill is requested. If bills are paid monthly, a discount of ten per cent. is given. Bills not paid promptly will be passed to my attorney for collection. If you pay your physician promptly he will attend you promptly, night or day, rain or shine, while your slow neighbor suffers and waits, as he made the doctor wait, and while he is waiting the angels gather him in."—*Kansas Medical Journal.*

SYPHILIS OF THE NASO-PHARYNX, WITH REPORT OF A CASE OF TERTIARY SYPHILIS OF THE SPHENOID.[1]

By LOUIS E. BLAIR, M.D.,

ALBANY, N. Y.

Syphilis of the naso-pharynx will always be regarded with deep interest by the medical profession. On account of the important anatomical relations which exist between the naso-pharynx, the nasal fossæ, and their accessory sinuses, any serious inflammatory disturbance in one part very readily communicates with another, and what at one time seems a simple condition becomes rapidly converted into a very complicated and dangerous state of things. In close proximity to the Eustachian orifices very formidable difficulties may arise in connection with the auditory apparatus. Tertiary lesion of the structure of the naso-pharynx itself may rapidly produce very serious brain disturbance, by virtue of the anatomy of the parts which enter into it. Again, when syphilitic lesions invade the nasal cavities and naso-pharynx, they become quite inaccessible to observation and treatment. Drainage is obstructed, and other conditions for development of inflammation are very favorable indeed, namely, heat and moisture.

The naso-pharynx resembles a rounded cube. Its superior wall, the roof of the pharynx, is formed by the body of the sphenoid and basilar portion of the occipital, and merges gently into the posterior wall, in the formation of which the atlas and first cervical vertebra take part. Anteriorly, the space is bounded by the nasal fossæ, the vomer, and palate. Its lateral walls are formed by the fossæ of Rosenmüller and the Eustachian orifices. This space is, as it were, a prolongation of the nasal cavities. Opening into the nasal cavities are those of other cavities by means of narrow sinuses, lined with the same mucous membrane, and very apt to be affected by the same morbid processes as those of the nasal cavities and the naso-pharyngeal space. When we consider the labyrinthine structure of the upper air-tract, in what narrow spaces it is contained, and how easily it is occluded, and at times blocked up completely, from seemingly slight causes, it is easy to understand with what difficulty diseases in this region are treated. When the body of the sphenoid becomes involved in tertiary syphilis it becomes a very serious matter. The body of the sphenoid is hollowed out in its interior so as to form a mere shell of bone, and of course is rather frail in structure. It is also well to remember the important position which the bone occupies at the base of the skull, and its anatomical importance in reference to the brain, its membranes, and the circulation. Tertiary syphilis of the naso-pharynx may involve large portions of the ethmoid, and the basilar process of the occipital may be destroyed in whole or part. The syphilitic inflammatory processes involving the bones of the nasal cavities and naso-pharynx, which also enter into the formation of the base of the cranial cavity, may rapidly produce a fatal inflammation of the brain and its coverings. Trousseau reported a case where a large piece of the ethmoid being destroyed, sloughed off and almost produced suffocation by dropping into the throat. The same patient died next day with acute cerebral symptoms, due no doubt to the disease spreading to the brain. Another case is on record where the disorder extended through the cribriform plate of the ethmoid, giving rise to epileptiform and maniacal convulsions which terminated fatally. McKenzie also quotes a case reported by Baraloux, in which almost the entire body of the sphenoid was expelled from the nose without any signs of cerebral complications having been observed. A case occurred in my practice where a piece of the posterior border of the vomer became detached by syphilitic necroses, and during sleep dropped into the larynx, and, fortunately for the patient, lodged above the vocal cords

[1] Read before the Albany County Medical Society, N. Y., January 23, 1893.

and was partially held in one of the ventricles of the larynx. It produced very violent fits of coughing and great pain and distress, while the patient could not account for the sudden onset of such violent symptoms. The sequestrum was easily removed on the following day with forceps, with complete relief to the patient.

A few writers, notably among them Bosworth, hold that tertiary syphilis of the naso-pharynx shows but little tendency to take on a destructive or a spreading condition, but seems to be confined to the original area as marked out by the gummatous swelling. I do not think that the clinical history or facts will bear them out, for the simple reason that these later manifestations are developed many years after the initial infection, and that too, as a rule, in patients who have been poorly treated, whose general health is depleted or only fair, and where all the conditions are most favorable for the spread and development of the syphilitic virus. I do not see how this serpiginous action can be well avoided or hindered.

Secondary and tertiary lesions of the nasal cavities and naso-pharynx are comparatively rare as compared with those occurring in the mouth and fauces, the ratio being as low as one per cent., and not higher than two and one-half per cent., in a long series of cases, and the observations extending over a long period of time. For five consecutive years, in one of the largest clinics of Paris, secondary syphilides of the nose occurred only in about one per cent. of all the cases treated.

The formation of nodes or gummata, when occurring in the naso pharynx, are more or less difficult of diagnosis, especially if a previous syphilitic history is not clearly made out. Frequently the true nature of these swellings is not recognized until the node breaks down and is followed by a deep, foul ulcer, accompanied by painful deglutition. These swellings have often been mistaken for adenoid hypertrophies, and valuable time in treatment has been lost. When there is doubt as to diagnosis, all other symptoms should be gone over and duly weighed. There are, however, signs of specific disease in the throat which seldom fail. They are known as the brick-red arch of Pick, so called from the distinguished dermatologist, at Prague, who first called attention to this condition. They are described as two brick-red, narrow bands of infiltration and inflammation, running along the margin of the arcus-palato-glossus, starting at the tonsil and stopping short equidistant from the root of the uvula. After one is familiar with this fact, it is interesting to note how rarely it is absent in a syphilitic throat. One of the most characteristic and constant signs of tertiary syphilis in the nose and naso-pharynx is the intolerable stench which accompanies it. The offensive smell of ozæna can be vastly modified by deodorizing washes, but that of syphilis remains superior to treatment and paramount to medicines. This stench is characteristic of necrosis. The diagnosis must also be made from tuberculosis and lupus. Primary tuberculosis in the nose and naso-pharynx is almost a curiosity, being rarely seen; while other physical signs of the chest, and the aid which the microscope now furnishes, will materially help. The mucous membrane is also deeply congested in syphilis, while in tuberculosis it has a peculiar pallor. Lupus is essentially a disease involving cartilage and skin. In cases of doubt larger doses of iodide of potash will very often clear up the uncertainty.

The following case in practice, which is illustrated by this specimen of a necrosed portion of the body of the sphenoid, will be briefly reviewed, and the treatment discussed. As you will observe, the sequestrum represents at least one-half of the body of the sphenoid. The sphenoidal sinus on one side is complete, and the smooth surface indicates the area which was covered with mucous membrane. Mr. R. E——, aged thirty-five, came to me about one year ago for the purpose of getting relief from a very painful and obstructive trouble in the nose and throat. For three weeks both nostrils had been closed, and the throat was so swollen and painful that he could only swallow liquids with difficulty. He complained especially of tinnitus, with sharp lancinating pains deep in the head, with an oppresive headache in the vertex. The severe head symptoms produced dizziness, a staggering gait, at times unconsciousness, nausea, and withal great prostration. The cerebral disturbances were prominent. His sleep was very poor, and his general health wretched. He gave a history of syphilis of twelve years' standing. On examining his mouth there was seen a perforation at the junction of the hard and soft palate of one-fourth inch in diameter; in the nose the cartilaginous septum was perforated, and otherwise nothing else could be made out on account of the closure of both passages. There was a fetid discharge from both nostrils, and it had the characteristic odor. By probing carefully through the opening in the palate, the location of the diseased bone pointed clearly to the sphenoid. The sequestrum did not appear to be loose, nor was it deemed prudent to use much force by curetting to free it, on account of the location of the necroses and the danger of inflicting greater harm, and the possibility of perforating the frail body of the sphenoid. McKenzie and McDonald are the only writers that I am familiar with who have raised their voices against using violent measures in treating necrosis of the ethmoid, the sphenoid, or basilar process of the occipital, as, for example, curetting with Volkman's sharp spoon, as advocated by Schech, Schuster, and Zauval. Where the necrosis can be safely reached, in other parts of the nasal cavities, although not always visible, the cure is very much hastened by thorough curetting and removal of all necrosed tissue, and the intolerable odor is likewise eliminated and the patient made at once far more comfortable. The treatment pursued with this patient was as follows: A small bent tube was carefully passed through the opening in the palate, and the nasal spaces and naso-pharynx were thoroughly irrigated three times daily with a warm solution of permanganate of potash, ten grains to a pint, followed each time with a liberal insufflation of iodole. As the swelling of the soft parts diminished the sequestrum of bone could be treated through the nose. It was gradually loosened up and was gently pushed forward by a laryngeal probe, and was removed through the mouth. At first it was impossible to reach the necrosed process through the anterior nares, but within ten days after beginning treatment the inflammation so far subsided that the nasal passages were patent again, and all of the severe cerebral symptoms of intense headache, tinnitus aurium, nausea, and dizziness were mostly gone. The previous loss of substance in the hard palate materially aided and simplified the treatment. In a similar case of tertiary syphilis, involving the sphenoid and showing cerebral symptoms, I would recommend at once a free incision through the soft palate for the purpose of antiseptic irrigations and drainage. For deep ulcerations of the soft parts, with tendency to phagedena, I prefer the free use of fuming nitric acid applied on a hard rubber probe, to the solid stick or strong solutions of silver. Adhesion of the soft palate to the pharynx is not uncommon, and may produce stenosis in all stages, even to complete occlusion of the naso-pharynx. Dr. Griffin, of New York City, reported such a case in the MEDICAL RECORD.

The constitutional treatment of subjects of tertiary syphilis is by no means a secondary consideration. In all these cases it will be found that, at the very beginning it is very necessary, urgently necessary in fact, to try to improve as rapidly as possible the general tone of the system by easily digestible food of the most nourishing kind, aided with suitable malt tonics. In patients who have led a dissolute life, whose habits have been intemperate and irregular, who have been treated indifferently or have neglected to take suitable remedies prescribed, and have thus drifted along from bad to worse during the period of eight, ten, or even fifteen years, it is in just such subjects that the ravages of tertiary syphilis are wrought. This is further illustrated in the case under discussion. This patient contracted syphilis twelve years ago, was

poorly treated, and was a very intemperate individual. A liberal diet is just as necessary and plays just as important a rôle in treatment as specific medication, for, unless you have the blood in a reparative condition, it is useless to storm the patient with the depressing drugs of mercury and iodide of potassium, and furthermore, you will fail to arrive at any satisfactory results in treatment. Following out this plan, Mr. E—— made a rapid recovery and has remained well since then.

Clinical Department.

REPORT OF THREE CASES OF SCARLET FEVER, WITH SECONDARY ATTACKS, OCCURRING IN ONE FAMILY.

By J. M. KENNEDY, M.D.,

NEW YORK.

In Keating's "Cyclopædia" the statement is made that scarlet fever rarely occurs more than once in the same individual, and further on in the same article it says that "the survival of susceptibility is most frequently a family inheritance, and in rare instances changed conditions of life seem to have revived the susceptibility."

In the cases which I have to report both of these conditions seem to exist.

Two years ago I was called to attend Johanna M——, two years of age, who was suffering from a well-marked case of scarlet fever, and at that time there were other cases in the same house. Two older children of the family, I was informed, had already had the disease in Edinburgh, Scotland. The patient made a good recovery, and the other children, although exposed to the disease, remained in good health.

In January of this year I was called to see Bella M——, eight years of age, who had developed a rash, accompanied with marked angina, and who had been exposed to scarlet fever the preceding week. There was no question about the diagnosis, although the mother informed me that she and her brother were the two who had the disease in Edinburgh, the diagnosis having been made by a gentleman of large experience in that city. Several days after this case developed, James, ten years of age, also came down with the same trouble. This case almost convinced me that the children did not have the fever in Scotland, when the child which I had treated two years ago for scarlet fever was again stricken down with it. The children all made a good recovery, although the course of the disease was much more severe in the second attacks.

The cases are of interest from the fact that there seems to be a family susceptibility to the disease, and also that the changed conditions of life may possibly have had some influence upon it, two of the children having had the disease first in Scotland, and the second attack in this country, the other child having had both attacks in this country.

A PERSONAL EXPERIENCE WITH APPENDICITIS.

By EDWARD C. RUNGE, M.D.,

INSTRUCTOR OF PHYSIOLOGY AT THE MEDICAL DEPARTMENT OF WASHINGTON UNIVERSITY, ST. LOUIS, MO.

Prior to September 13, 1892, I enjoyed absolutely perfect health. On the morning of that day I arose without feeling even the slightest discomfort; my bowels performed their function at the usual time in the most satisfactory manner. After partaking of a hearty breakfast I made a few professional calls. Soon after, I was taken suddenly with a severe colicky pain, in the region of the epigastrium. As a self-administered opiate failed to give relief, I called for my friend, Dr. Greenfield Sluder. Upon arrival he found me pale, tremulous, suffering with intense pain, with nose, ears, and extremities cold, slight nausea, with a temperature of 97° F., and a pulse of 90. Physical examination did not reveal anything except exquisite tenderness over the epigastrium. My stomach was subjected to a thorough wash, which procedure brought forth some *débris* of food, but failed to afford any relief. During a subsequent carriage drive the pain grew more intense, acquiring a more diffuse, shifting nature. On the next morning Dr. Sluder made out a distinct swelling in the right iliac fossa, which he unhesitatingly pronounced to be due to an acute appendicitis. Pressure over the classical area elicited extreme tenderness. The thermometer registered 100.2.° F. The bowels had suspended their action on that day, and complete anorexia had supervened. Drs. W. E. Fischel and Henry H. Mudd, who were called in consultation, and kindly agreed to watch the course of the case, corroborated fully Dr. Sluder's diagnosis. Dr. G. Baumgarten, who visited me during the later phases of my illness, confirmed the presence of a distinct thickening in the ileo cæcal region without specifying the exact locus morbi.

The rather grave initial symptoms which, in their aggregate, pointed to slight shock, were followed by a mild course. There never was a chill, or even chilliness; the temperature ran irregularly between 99° and 100.6°, only once rising to 101° F., toward the termination of the illness, to which recrudescence no course was assignable.

Enemata and small doses of sulphate of magnesium kept the bowels gently open; some meteorism was present during the first few days, but subsided completely. The pain and tenderness gradually diminished, *pari passu*, with the decrease of the exudate. Fourteen days after the initial attack no thickening was palpable, and on October 5th, I was able to resume my work. For some little time I retained a "dragging" sensation in the affected region, which I believe to have been of purely cerebral origin. My fears of being compelled to enter upon a life of irksome bowel hygiene were agreeably dispelled: two seidlitz powders taken in the course of the four days following my emerging from the sick-room proved sufficient to set the pendulum into motion, and my intestinal regularity is as nearly ideal as it ever was.

There is a class of surgeons—styled by some "radical"—who scorn and distrust all of the ways of nature. Our periodicals teem with suggestions of never placing any reliance upon the latter, but of giving the knife full sway at the slightest provocation. I am profoundly thankful for the good fortune that surrounded my sick-bed with men of a different type, *i.e.*, men of sound, truly scientific judgment. The recovery I made may possibly prove temporary, and a second attack may strike me down at any future time. I am willing to run that risk, and during the respite I shall not cease to be grateful for having so far escaped the possession of an abdominal cicatrix! A lesson brought so near home is never to be forgotten. I shall guard my patients more zealously than ever from falling easy victims to reckless surgery.

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CONTAGION OF PNEUMONIA.

By JOHN H. GIRDNER, M.D.,

NEW YORK.

I desire to place on record the two following cases of croupous pneumonia because their development was either a remarkable coincidence or strong evidence of the communicability of that disease. On the morning of January 31, 1893, Mr. L——, a newspaper man, aged thirty-one, was suddenly attacked with a severe chill. I saw him two hours later and diagnosed acute croupous pneumonia on the left side, and as the disease advanced nearly the whole lung on that side became solidified. The heart behaved badly from the first, and the temperature reached 105° F. on the second day, and was never below 102° F. He died of œdema of the lungs and heart failure on February 5th, five days from the day of attack. On the day he was taken ill I secured for him the services of a trained nurse, Mrs. C——, aged about fifty, a well-developed, well-

nourished, healthy woman. This woman, assisted by a relative of the patient, nursed him until the day before he died; on the afternoon of that day, while on duty in the sick-room, the nurse was seized with a severe chill and was at once sent home, and took to her bed. I saw her the next morning and found her suffering from croupous pneumonia also, nearly the whole of the left lung being involved, and her symptoms in all respects closely resembled those of the patient, Mr. L——, she had been nursing for the past four days and nights. She died on the fourth day from the date of her attack, the immediate cause being, as in the other case, œdema of the lungs and failure of the heart.

The disease was unusually severe in both cases from the very onset, and all treatment was futile; the course and termination in the two cases was identical.

Cough and expectoration were prominent symptoms, and the nurse, who was competent and faithful, constantly lifted the patient, Mr. L——, from his pillow by placing one arm back of his neck and holding a towel for him to expectorate in, thus inhaling the exhalations from his lungs during his fits of coughing. I mention this fact because, if, as some authorities believe, the contagion is contained in the sputa and expired air, the nurse had every opportunity to contract the disease.

A CASE OF GENERAL DYSCRASIA.

By F. P. EMERSON, M.D.,

CHESTER, VT.

In the fall of 1887 Mrs. S. B——, aged forty-one, consulted me with the following history: Father died of pneumonia, mother died of measles. One brother died of phthisis, one paternal and one maternal aunt and one maternal uncle died of phthisis. History of grandparents negative. Patient of lymphatic temperament and sedentary habits. No previous disease, other than those of childhood, until six years previously, when she commenced to exhibit symptoms of gastro-duodenal catarrh of a subacute type. This was relieved by proper medication, but showed a tendency to recur at frequent intervals. There was a history of two acute attacks that were diagnosed as gall-stones.

At this time the patient was fairly well nourished, and able to attend to her household duties. The skin and conjunctiva were slightly jaundiced, the tongue was red and fissured. Some tenderness of the epigastric and right hypochondriac regions. The temperature and pulse very normal. There was a history of some stomach trouble and looseness of the bowels. The urine was almost bloody in appearance. Examination of the liver, stomach, and spleen was negative. During the next three years after she came under my notice there was a repetition of the gastro-duodenal trouble, with one attack of gall-stones. With each renewal there was tenderness at the epigastrium, icterus, high-colored urine, nausea, and all the classical symptoms of a duodenal catarrh, which would subside under strict regimen and treatment, only to reappear at intervals of two or three months, so that Mrs. B—— consulted me regularly about once in ten days or two weeks until September, 1891 when a general anasarca supervened. With the assistance of Dr. Bryant, of Ludlow, paracentesis abdominalis was performed and twenty pounds of a greenish serum were withdrawn. During the winter of 1891 my notes show that I tapped her at intervals of two weeks, averaging twenty pounds of fluid, besides using diuretics and cathartics, although not in the heroic doses subsequently employed. In the spring of 1892 I informed her husband that the treatment was merely palliative, and she fell into the hands of some men in the South, who advertised to cure dropsy for thirty dollars. I continued to tap her when necessary. The treatment of the Southern charlatans consisted of a round bolus, the size of a cherry, at bedtime, followed by Epsom salts on rising, until the bowels moved ten or twelve times. This treatment was heroically persevered in without change for a year, when the salts caused so much gastric irritation that they could not be retained. Mrs. B—— continued to be about the house, and with her husband's assistance looked after the domestic duties. She steadily emaciated, although slowly, and with the discontinuance of the salts I was obliged to tap her every eight or ten days. The patient was now weak. The abdominal walls were thinned from over-distention, and there was a large umbilical hernia, but she complained of little except her dropsy, and was about the house except on the day she was tapped. Her appetite was good, and she rested well. Physical examination gave negative results beyond showing the existence of some functional troubles, which were attributed to obstruction of the portal circulation. Her menses had been regular until within a year. She gradually emaciated and died in January, 1893, two years and four months after developing abdominal dropsy. The urine, in regard to specific gravity and albumin, had always been normal. During this time—from September, 1890, until January, 1893—she was tapped sixty-five times, averaging by actual weight twenty pounds of serum each time. During this period she had taken one hundred and fifty-four pounds of Epsom salts.

Autopsy, by Dr. W. L. Havens, of Chester Depot, and myself. This was performed hastily, and with not as much exactness as it should have been, owing to extreme cold and the fact that the woman's house was ten miles from our office. The body was extremely emaciated. The stomach was dilated, spleen much enlarged, liver and gall-bladder normal. The pancreas was enlarged and infiltrated. The right ovary and uterus could not be made out, but the broad ligament could be easily traced, and at the site of the uterus was a new growth, of cauliflower appearance, the size of an English walnut. The left ovary was cystic, and the whole pelvis was full of adhesions and a suppurating mass. There had never been any subjective symptoms of any trouble about the generative organs, and during the last two years patient complained of little beyond discomfort. During the last month she would be unbalanced mentally, just before tapping, and afterward seemed all right.

OCCLUSION OF STENO'S DUCT BY SALIVARY CALCULI—OPERATION AND CURE.

By JOHN A. WYETH, M.D.,

PROFESSOR OF SURGERY IN THE NEW YORK POLYCLINIC; SURGEON TO MOUNT SINAI HOSPITAL.

M——, female, at the age of two and one-half years, then in perfect health, was struck by a rubber ball on the right cheek. Although the trouble with the parotid duct was referred by the parents to this injury it is very likely that it had nothing to do with it, since the swelling due to obstruction was not noticed until two and a half years later. The tumor was then incised from inside the mouth, by Dr. Kinloch, of Charleston, and the contents—a clean and somewhat viscid liquid—permitted to escape. This operation was repeated on several occasions, but as fast as the wound would close, the swelling recurred and was as painful as ever.

I saw this child in the spring of 1892, when she was six years old. Her face was greatly disfigured by the swelling. Careful palpation under chloroform did not detach any calculi, on account of the distention. Suspecting the presence of a lymphangioma (lymphangiectasis), two cases of which I had operated upon by extirpation, I incised the tumor from the outside. A large cavity, cystic in character, was entered, and as the fluid contents escaped I was able to recognize a series of calculi, five in all, spherical in shape and varying in diameter from one-sixteenth to one-eighth of an inch, blocked in the duct of Steno. This was incised and the stones removed. The external wound was carefully united by silk sutures and an exit for the saliva established through the mucous membrane. The wound healed

and the patient made a perfect recovery. It is now almost a year after the operation, and she is still well, with no tumefaction and a free escape of saliva into the buccal cavity. Some six years ago I exhibited a boy who, as one of the sequelæ of scarlet fever, had occlusion of Steno's duct by stricture and salivary fistula beneath the ear. The stricture was found by dissection, the duct divided just at the proximal side of the obstruction, and the end carried into the mouth and stitched to the mucous membrane of the buccal wall. In this case the flow of saliva into the mouth was re-established, and the fistula closed by freshening the edges and sutured. These cases are so rare that I desire to put them on record.

SPONTANEOUS HYSTEROTOMY.

By T. O. HUTSON, M.D.,

COHNAW, S. C.

The patient, a mulatto woman, about thirty-five years of age, had aborted several times, and never been able to carry a child to term. She was attended by a midwife, who claimed that the child and placenta had been delivered naturally, and that, on the woman's getting up to stool, the womb came down and out into the world. (Just here it is well to state that it is the custom among the negro midwives in this section to deliver the woman in a kneeling position before a chair; and when they do not consider labor progressing rapidly enough, two of them get one on each side of the patient, and shake her up and down, by a series of jerks, until pains come on more rapidly.) The patient had been lying in this condition for about three days, in the hot summer-time, on a filthy mattress. I was then called, and on examination found the poor creature in an unconscious condition, abdomen enormously swollen with a peritonitis, and a putrid, pulpy mass protruding from the vagina, which seemed to be the inverted uterus, which had virtually amputated itself by the contractions of the cervix upon the ligaments and tubes. This was removed *en masse*, and the vagina plugged with gauze smeared with carbolized vaseline.

As the woman seemed in a dying condition there was very little treatment carried out. To my surprise, however, she made a good recovery, and at last accounts was enjoying very good health.

It was a great disappointment to me that I was never able to examine the woman afterward, as she moved away soon after her recovery.

DETERMINATION OF THE SEX.

By GEORGE ABBOTT, M.D.,

HAMBURGH, N. Y.

In the Medical Record of February 18th, on page 213, is a statement relative to the procreation of sex, which is in such accord with my own observation that I am constrained to give a couple of confirmatory instances.

Over thirty years ago I delivered a young woman of a daughter, who had been married just nine months and a few days. Her mother said that at the time of the wedding her daughter had but just recovered from her menstrual period.

A year or so after this my wife assisted in dressing a lady for her marriage who also had but just recovered from her monthly period. In nine months thereafter this lady gave birth to a daughter.

In my forty years' practice I have met with several instances which, though perhaps not as clearly distinct as those given, still seemed to point so directly to the idea that a conception occurring just previous to the menstrual period would result in a son, and if just after, a daughter, that I have for many years made my prognosis of the sex of the forthcoming child upon the relation that the hour of conception bore to the normal period, with almost unerring certainty when we could depend upon the facts.

PERFORATION OF THE STOMACH, SIMULATING INTESTINAL OBSTRUCTION.

By H. BLANKENHORN, M.D.,

O'NEILL, O.

Benedict R——, a Swiss, aged about fifty-five, a cooper, and a hard laboring man, became violently sick on Sunday, August 14, 1892. I was called to see him, and elicited the following history: He said that he had been very sick twenty years previous, with abscess of the stomach; he was cared for in a prominent hospital in Bern, Switzerland, and since that time has experienced more or less pain, at intervals, in the region of the stomach. Of late years he has suffered much from constipation, resorting frequently to the use of sulphate of magnesia to effect a motion of the bowels: of late there has been occasional vomiting, with distress after taking food. The patient had been in the habit of taking alcoholic drinks during his life, but I believe not excessively during later years. On the above date he took part of a glass of beer. I was called half an hour later and found him sitting in a chair, in great agony, complaining of pain in the left hypochondriac region. The pulse was rapid and very weak, the face anxious, and the man had the appearance of being in collapse. By the use of hot fomentations and hypodermic injections of morphine he was made somewhat more comfortable. The first twenty-four hours there was no marked change. The patient could not take food and he complained of thirst; the temperature was 101° F., breathing rather fast. I administered olive-oil, and used enemata without a result. On the second and third days there was very little change, temperature 102° F. The man would sleep under morphine. No food was taken and no motion of the bowels took place, although injections were made, with the pelvis elevated, through a large rectal tube. He began now to develop peritonitis, the lower part of the abdomen becoming tympanitic. Diagnosis, perforation of stomach or small intestines near the stomach. Next day a consultation was called, and a good diagnostician with large experience looked upon the case as being one of intestinal obstruction: he advised the continuance of the enemata, but in spite of every effort no motion of the bowels could be effected. The abdomen became greatly tumefied, pulse weaker, general condition more desperate, until on the morning of the sixth day from the above date the patient died. Post-mortem examination showed the abdomen filled with fluid and some pus; the large intestines were empty, the small intestines normal. The transverse colon near the stomach was somewhat inflamed, the stomach normal in size, but presented a perforation one inch in length at the larger curvature, the result of chronic ulceration. A large cicatrix had formed, circular in shape, measuring three inches in diameter, and three-fourths of an inch at the greatest thickness: in the centre of this a cup-shaped erosion or ulceration had been in process, no doubt, for years, until the wall of the stomach was reduced in thickness to that of paper, and finally gave way.

TREATMENT OF DIPHTHERIA.

Dr. W. E. Putnam, of Whiting, Ind., writes: "I wish to make known a plan of treatment in diphtheria which I have just carried out successfully in the case of my own children, aged two, four, and five years respectively. I used a spray of peroxide of hydrogen, full strength, to which I added one part per thousand of corrosive sublimate. I reasoned that if others can give one-half grain of sublimate a day internally, I can use a grain a day in my atomizer, knowing that the child will spit out nine-tenths of it. I also used a little oil stove, a tin tea-kettle, and a piece of hose three feet long. In the kettle I put turpentine and lime-water, in the proportion of a tablespoonful to a pint, and then steamed the child, placing the end of the hose six or eight inches from his mouth."

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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FURTHER POINTS TOUCHING MEDICAL EDUCATION IN THE UNITED STATES.

IN Dr. Holmes's article, based on "The Forthcoming Report of the Bureau of Education on Professional Education in the United States," to which reference has already been made in the RECORD, the author notes a gratifying improvement in many directions. Nevertheless, in comparing America with France or Germany, our own country still appears at a disadvantage.

Dr. Holmes says it must be remembered that the American professional schools are not parts of universities in any such sense as they are in Germany. Most schools of law, medicine, and theology are open to any applicant with even the rudiments of a common-school education. The course of study is shorter and, in medicine, graduation generally entitles the holder of the diploma to a license to practise. From all of these causes, and because our people require and pay for more, if not for better, medical service than the Germans and French, the ratio of medical students is, with us, absolutely and relatively greater than in either France or Germany.

According to the author's figures it cannot be doubted that at present a relatively smaller number of medical students have the bachelor's degree than in 1880, though the education of the average medical student is superior to the education of the average medical student ten years ago.

Last summer many of the college journals gave the statistics of the graduating class. The author selected seven such compilations and noticed an astonishing series of figures under the caption "Prospective Calling." Almost forty per cent. of the June graduates were put down for law, about the same number for theology, while only about five per cent. had selected medicine for their future study. This shows evidently that medicine is not attractive to the college-bred man.

This is in marked contrast with conditions abroad, where medicine is the most popular profession with college-bred men. Dr. Holmes puts the following pertinent question: "If medicine is sought by the educated German and is neglected by the educated American, may it not be the fault of the medical schools themselves?"

In answering this query in the affirmative, he says that many and widely separated causes are responsible for the present state of affairs. Medical education has not been controlled by educators, but by clinicians. The antique methods of the Revolutionary period prevail in the great majority of medical schools to-day. Even in those medical schools that are most intimately connected with State or private universities, other rules and other methods than those of the literary and technological departments prevail. In the report which furnishes the material for his article, he is astonished to find that in one of our university medical schools the course of lectures is so arranged that each student hears every lecture repeated the second year of his attendance, and then passes his examination and graduates. Can any educated man endure this, in this last decade of the nineteenth century? The fact is apparent to any student that medical schools are run for the good and profit, if not for the glory, of the professors. These men want quick returns, and they adapt their instruction to the unevolved mental maws of the students that come in the greatest numbers. Such pap the college-bred man does not relish. To such instruction the university teachers do not recommend men for post-graduate work. To such instruction the American university too often gives its name, though withholding its support.

The author's strictures are based on conditions which unfortunately still prevail in many parts of the United States. But some notable exceptions already exist, such as Harvard, Columbia College, and the Johns Hopkins University. Our institutions are such that the State cannot be relied upon to advance the cause of medical education. But the benevolence of private citizens has already accomplished a great deal more than Dr. Holmes seems willing to admit. It is reasonable to expect further substantial progress in this direction. A promising feature of the present outlook is found in the circumstances that the East and West, equally with the North and South, have received their share of recognition at the hands of private wealth. Moreover, it is beginning to be an accepted maxim now with the rich, that it is generally better to liberally endow old schools than to supply funds for the establishment of new ones. The present condition of medical instruction throughout our country is certainly not above reproach; but its promise for the future was never better than now.

DUST AND DISEASE.

WITH the advent of spring the physical endurance of those New Yorkers who have survived the hardships of an unusually severe winter is put to another trying test. Scarcely has some of the heaped-up street rubbish, which for months was allowed to endanger the public health, been gradually washed away by the kindly elements, when the playful breezes following a sunny Easter-tide are upon us with blinding clouds of germ-laden dust. Our streets are now swept, and doubly so. First by the superannuated brigade of dilapidated broom-handlers, and next by vigorous winds. It would be irresistibly amusing, if it were not so sadly humiliating from a sanitary point of view, to watch the tender solicitude with which the paid servants of the municipality slowly gather together little heaps of dry dirt, and the reckless way in which these accumulations are immediately dispersed by gusts of strong wind.

Physicians need not be told of the manifold dangers of out-door dust. And it is almost criminal negligence on the part of those paid to protect us from disease to allow the present system of dust dispersion to continue.

We have now an abundant water-supply, and sprinklers should everywhere be used in a liberal manner. What other city of equal importance with New York would tolerate what we meekly submit to in this matter of death-dealing dust. It is not merely an affair that incommodes the housekeeper, for indoor dust can never be altogether escaped from; but inviting disease by permitting those who are paid to remove dirt to allow it to be dispersed in deadly, pulverized, desiccated shape is a sin that should put us all to shame.

It is time for outraged civic intelligence to rouse up and assert its just rights. If the men now in power are incompetent to give us the protection which it is their plain duty to provide, by all means let us have a change. The public health must no longer be trifled with. The limit of our endurance has been reached. With the prospect of a cholera visitation during the coming summer we are in no condition to take any chances. Give us clean streets, use water a little more liberally, and save us from pestilential dust.

THE CHIEF MEDICAL OFFICERS OF ARMY AND NAVY.

THE important appointment of Surgeons-General of the Army and Navy will have to be considered by the President and Secretaries of the Army and Navy in the course of a few weeks, on account of the retirement of the present incumbents in May next.

As the appointments are of selection from the list of Medical Directors and Medical Inspectors in both services, there will be many candidates in the field. It is hoped, however, that, like in all Mr. Cleveland's appointments so far, the best men will be chosen for the place, and those whose official and professional records are sufficiently established to insure four years of intelligent work.

THE SANITARY ASPECT OF ELEVATED ROADS.

THERE is much discussion at the present time over the question of rapid transit in this city. It is assumed that all the arguments, so far as health goes, are on the side of the elevated road, and against underground transit.

This is far from being actually the case, and it would be quite worth while for those interested in the question to look into the matter of the unhealthfulness of elevated structures. For those who ride in them it is well enough, although the cars are intensely hot, uncomfortable, and ill ventilated during the summer season. But for the city as a whole, the elevated structures have a number of unhealthful features. First of all, they obstruct light from the streets, houses, and shops. These are rendered more damp and better adapted for the development of germs of disease. A three-track structure in a street practically turns it into a half-cellar, and compels thousands of people to live or work in darkened and noisy homes.

The elevated structures collect also an enormous amount of dust, cinders, dirt, and filth. It is so much more space for all those things which love darkness to breed in. They are also a source of continual danger to the eyes. Probably there are no days in which many people do not get cinders in the eyes, with more or less disastrous results.

Finally, there is the element of constant noise. People get accustomed to noises, to be sure, but the effect does not cease. The nerve-centres must be more worn upon than if one lived in quiet. There is no question regarding this point: living in a noise is not healthful.

All these reasons may, and should, be seriously considered before it is decided to gridiron our town with noisy and unsightly structures, to the delectation of owners of Manhattan stock.

News of the Week.

Dr. Cyrus Edson, the New Health Commissioner.—The appointment of Dr. Cyrus Edson as Medical Commissioner of Health for New York cannot fail to give great satisfaction to the public and the profession. His long and varied experiences as sanitary inspector, chief of the Bureau of Contagious Diseases, and sanitary superintendent, thoroughly qualify him for his present responsible position. He has earned, by faithful, energetic work, every inch of his place, and we wish him every success in his new field. The best we can say for the new sanitary superintendent, Dr. Roberts, is that he will doubtless prove a worthy successor of his former chief. The appointment of Dr. Tracy as chief of the Bureau of Contagious Diseases is also a fitting recognition of most useful services rendered for many years to the Department. Altogether, the profession should be well satisfied with its present representatives in one of the most important departments in the city government.

Dr. J. J. Reineke has recently been appointed chief of the Sanitary Department of Hamburg. He had been discharging the duties of the office since the retirement of the late Dr. Kraus.

Dr. William Seymour, of Troy, died recently in that city. He was a graduate of the Medical Department of the University of Pennsylvania in the class of 1848, and was for several years health officer of Troy. He was a member of a number of medical societies, local, State, and national, and had held professional chairs in the Castleton, Vt., Medical College, the Berkshire Medical Institute of Pittsfield, Mass., and the Albany Medical College.

The National Conference of the State Boards of Health was held in this city last week. Many reports were presented, and a number of sanitary subjects discussed, but the deliberations were concerned chiefly with the measures necessary for dealing with cholera in case the disease makes its appearance here during the coming summer. The committee appointed to formulate a plan for inter-State inspection, recommended that in case of an epidemic of cholera no infected persons shall be allowed to board a train. During such period of infection a medical inspector shall leave with each outgoing train. It shall be his duty to look after the sanitary condition of the train, see to the disinfection of the closets, and, in case of any symptoms of disease being developed en route, isolate the suspects in a separate car. In case of actual disease the car shall be shunted at some way station. This inspector will be provided with lists of physicians along the route, and also be required to send a list of all other passengers on the infected train ahead to their des-

tination. The conference decided that ordinary merchandise, and even mails, do not usually require disinfection, but it insisted that baggage and articles of wearing apparel shall be thoroughly disinfected, and a card placed on them stating where they were so disinfected, and what methods were used. The Sanitary Council of the Mississippi Valley held a special meeting apart from the general conference, and passed resolutions requesting the Surgeon-General of the Marine Hospital Service to make a thorough investigation of the cholera in Russia, and, if the facts seem to justify it, to lay the case before the authorities in Washington, and to ask the President to prohibit immigration, either in whole or in part, under the new quarantine laws.

A British Hospital at Cannes.—A meeting of English residents at Cannes was recently held, under the chairmanship of the Bishop of Gibraltar, for the purpose of raising subscriptions for the establishment of a British hospital at that place. About one-half of the required $10,000 was subscribed, and it is hoped to raise the balance within a short time.

No Physician in the List.—The Mayor of the city has appointed a Committee of One Hundred to act in arranging for the celebrations attendant on the naval review. The list includes plenty of lawyers, editors, and business men, but no physician. It is at least a little undignified for the chief official of so great a city to exhibit his spite against the medical profession in this way.

Professor Koch has a Better Cure.—A cablegram from Berlin to the *Sun* says: "Professor Koch's experiments with bacteriological remedies for consumption have almost reached a point where he can make a definite claim of results which were prematurely asserted three years ago. Professor Scaglione, of Paris, quotes Dr. Koch as saying that the liquid which he has produced in his laboratory shows marvellous efficacy in overcoming tuberculosis. He administers the remedy by inhalation, not by injection, as in the case of the lymph, which gave him world-wide fame a few years ago."

Another Insane Asylum was burned to the ground on April 7th. It was the County Asylum at Delaware, O. All the inmates were rescued.

The "Polypathic Medical College" of Chicago has been incorporated at an expense of $6.50.

The Wisconsin Supreme Court recently decided that a medical man, to be considered an expert, must be experienced in the branch of medical science on which he professes to testify.

Appointment to Board of Charities.—Governor Flower has appointed Dr. Stephen Smith a member of the State Board of Charities.

The Cincinnati Medical Societies have combined under the name of the Cincinnati Academy of Medicine. Now the Colleges propose to unite under the auspices of the Cincinnati University.

St. Louis has a Medical Library.—On the evening of February 17th, in the presence of many of its friends and members, the St. Louis Public Library was formally and officially installed in its magnificent new quarters in the Board of Education building. The medical fraternity of St. Louis are more interested and concerned in this than in the usual run of public events, since it inaugurates a new era for them in the establishment of a medical library on a firm basis, in most inviting quarters, and under a plan that will compel growth and enlargement on a scale commensurate with the progress and activity of St. Louis as a city.—*Medical Fortnightly.*

New Salem Hill as a Health-resort.—Dr. Perry Marshall, of New Salem Hill, Mass., says that he has made very careful inquiries and has failed to find that a single case of pulmonary tuberculosis ever originated in that town. The Hill has an elevation of 1,100 feet, high enough to be above the valley fogs, but not so high as to possess a too rarefied atmosphere. The soil is a loam which is always dry a few hours after rain. The region abounds with white and yellow pine forests. The summers are cool, and the winters, though bleak enough, are not excessively cold, the mercury rarely falling below zero F. The scenery is beautiful, and there are fine drives in every direction. There are a few summer residents, but as yet there is no hotel or other good accommodation for visitors.

Symphyseotomy.—Dr. J. Clifton Edgar, of this city, on Friday, March 24th, at 12 P.M., in a tenement-house, and in the presence of the staff of the Lying-in Hospital (314 Broome Street), performed symphysiotomy upon a primipara for flattened pelvis. The family demanded craniotomy in the interests of the mother, she having been in labor two days. He secured a living child, and both are doing well.

Dr. Laurence Johnson.—The following resolutions were adopted by the Trustees of the New York Academy of Medicine at a meeting held March 23, 1893:

Resolved, That the Trustees of the New York Academy of Medicine are deeply sensible of a great loss through the death of their recent associate—Laurence Johnson.

Resolved, That they have long shared with his professional brethren an appreciation of his faithfulness to every trust; his versatility of accomplishments; his gentleness of spirit and charity toward others; and the many traits that contributed to his noble nature.

Resolved, That although his untimely death leaves in our circle of associates a gap that no one can fill, the memory that will ever remain among the most cherished of our lives will inspire us to emulate his manly character, professional zeal, and generous nature, and so long as this memory lasts will his influence among his former associates continue.

Be it also *Resolved*, That these resolutions be entered upon the minutes of this meeting and reported to the Academy, and that a copy thereof, signed by the remaining members of the Board of Trustees, be sent to the family of our deceased member.

A. M. Jacobus, *Secretary*.

Kissing the Book.—A great deal of fuss is being made by medical witnesses just now in regard to the manner of taking the oath in courts of law, and much nonsense is being talked and written as to the dangers of "kissing the book." I venture to say that no one ever knew a case where disease could be traced to "kissing the book," but I am ready to admit that many of the Testaments used in the law courts have a very dirty look outside, although I have generally been able to find a tolerably clean page inside to apply one's lips to. It is possible to

be more nice than wise, and to refuse to take the oath on account of the risk of catching some disease only tends to make us appear ridiculous in the eyes of the public.—*Hospital Gazette.*

Billroth and the Good Samaritans.—Professor Billroth and Dr. Prix, Mayor of Vienna, have sent out a call for a congress of philanthropists to meet in Vienna next summer and organize the International Association of Good Samaritans. The general objects of this association will be to discharge in peace duties similar to those discharged by the Red Cross in war. Each national branch of the Good Samaritans will have the supervision of the association's work in its own country. It will be expected to keep stores of clothing, tents, and provisions always ready for use, and, whenever any considerable portion of its people is overtaken by a great calamity, like the earthquake in Zante, the famine in Russia, or the Johnstown flood in the United States, to send these stores to the afflicted district. When epidemics like the cholera prevail the Good Samaritans will act in concert with the health authorities in promoting preventive measures, and will draw on their funds and stores for the relief of the widows and orphans. In general their work might be best described as an imitation on a magnified scale of the practice and precepts of Count Leo Tolstoï's family during the great Russian famine. In war the Good Samaritans will be at the disposal of the Red Cross Society. The motto of the Good Samaritans will be: "But a certain Samaritan, as he journeyed, came where he was: and when he saw him he had compassion on him." Billroth summons to the congress, which will more closely define the lines of organization and work, representatives of philanthropic societies, of physicians' associations, of rescue corps, and of athletic and military clubs, among whose objects is the relief of members and members' families in trouble. As the Good Samaritans expect to relieve much of the distress now relieved less promptly and less intelligently by the State, they will pass resolutions at the congress in favor of the small subvention of each national branch by its Government.

Virchow's Croonian Lecture, delivered in London recently, on "Pathology as a Branch of Natural Science," was largely of a historical character. Of this the *British Medical Journal* says: "Very gracefully, considering the occasion, and without any sacrifice of historical truth, Professor Virchow has delineated this progress by pointing out the great landmarks of scientific discovery raised by German and English investigators, whose close union and mutual reaction during three hundred years have so largely contributed to the great work of unification. Among the great names of German race come Vesalius, the reformer of anatomy, and Paracelsus, a personality difficult for other than Germans adequately to appreciate, but whose audacious revolt against dogmatic authority was a signal service (some may think his chief service) to the progress of medicine. Nevertheless, says Professor Virchow, he introduced into medical thought the first notion of a fundamental principle of life, tainted though this notion was with mysticism. In tracing the history of the conception of vitality, no one will be surprised at the importance attached to Harvey's fundamental discovery as the turning-point between the old and the new medicine. But few will be prepared for the important place given to Francis Glisson as the real originator of the notion of 'irritability,' which, in the hands of Haller, played so large a part in the evolution of modern physiology. Glisson's position as a physiologist has never been so clearly recognized by his own countrymen as it is in this generous appreciation. We see, as we approach the end of Professor Virchow's masterly historical analysis, one reason why Glisson's ideas have interested him so much. The conception of the 'elementary life of the several parts of the body,' which he regards as originating with the English anatomist, led, when the cellular structure of organized bodies was discovered, to the recognition of the elementary life of the cell. Ultimately, Virchow was able to formulate his celebrated dictum (modelled on Harvey's *omne vivum ex ovo*) of '*omnis cellula e cellulâ*.' From this to the location of diseased processes in the cell was a short and inevitable step. Thus we arrive at the cellular pathology. In a few lines at the end of the lecture is contained the essence of Virchow's pathological doctrines which have influenced the science of medicine more profoundly than those of any other living man."

These lines are: "And so, at last the great gap was closed which Harvey's ovistic theory had left in the history of new growth, or to speak more generally, in the history of animal organization. The begetting of a new cell from a previous cell supplements the reproduction of one individual from another, of the child from the mother. The law of the continuity of animal development is therefore identical with the law of heredity, and this I now was able to apply to the whole field of pathological new formation. I blocked forever the last loophole of the opponents, the doctrine of the specific cells of pathology, by showing that even diseased life produced no cells for which types and ancestors were not forthcoming in normal life. These are the fundamental principles of cellular pathology. In proportion as they have become more certain, and lastly of more general value, they have also secured for themselves great importance in physiology. The cell is not only the seat and vehicle of disease, but also the seat and carrier of individual life; in it resides the 'vita propria.' It possesses the property of irritability, and the changes in its substance, provided these do not destroy life, produce local disease. Disease presupposes life; should the cell die, its disease also comes to an end. Certainly, as a consequence, the neighboring and even far distant cells may become diseased, but, as regards the cell itself, the susceptibility to disease is extinguished with life."

Bronze Medals not Enough.—Two bronze medals which had been awarded to Dr. Sauvage and Dr. Leissen for their admirable conduct during the cholera epidemic at Brest and Hennebont have been declined by those gentlemen, the reward being considered inadequate to the services rendered.

The Chicago Water-supply.—The daily papers contain cabled accounts of a special report on the Chicago water-supply by commissioners sent by the *Lancet*. The substance of the report is that the water of the lake in its natural condition is of good quality; that this water is polluted by the Chicago River, the condition of which is so bad that the fluid discharged at its mouth is "worse than crude sewage;" and that water conveyed to the

city from parts of the lake that are free from contamination is polluted by contact with sewage deposits that have accumulated in the pipes. There is, it adds, great danger from contamination by impure ice. The pollution begins at the Chicago River, and increases until the maximum is reached in the vicinity of the stock-yards, near the southern branch of the pumping station, where the filthy conditions defied description. At certain points the condition of the Chicago River was worse than that of crude sewage. The smell was vile and nauseating. The temperature of the Chicago River water varied from thirty-three degrees Farenheit at the mouth of the river, to forty-four degrees at the stock-yards, while the temperature of the air did not exceed twenty-four degrees. It was safe, therefore, to conclude that the condition of the Chicago River in summer would be more abominable. The *Lancet*, in commenting on the report, counsels visitors to use no water but that which has been boiled and filtered, and concludes: "Our examination has led, on the whole, to a reassuring result; but we cannot feel free from serious misgiving until reassured on the question of contamination by ice. The statistics in our possession show that Chicago suffered from typhoid fever nearly eight times as much as London in 1880, and nearly twelve times as much as London in 1891. To our own people we commend in the strongest terms the advice to drink no water which has been cooled in contact with ice. To the people of Chicago we appeal to provide a water-supply free from this reproach."

A Successful Case of Pneumonectomy.—Dr. Lowson, of Hull, recently operated on a case of tuberculous disease of the lung by removing the right apex, to which the disease was limited. The patient bore the operation well, and was able to get up for a short time in the third week; she was then eating well and had no pain. The operation was commenced by the removal of the anterior third of the second and third ribs, the parietal layer of the pleura was opened, and the apex of the lung was pulled out after separating a number of extensive adhesions; the diseased apex was then transfixed with a needle and strong silk, firmly tied, and removed. The sudden development of pneumothorax gave very little trouble, and oxygen, which was at hand, was not needed. The respirations were never more than 44, and dropped in a day or two to 32, and soon after to 24; the pulse showed a similar elevation and decline. The highest temperature was 101.8° F.; this occurred in the second week, and lasted five or six days, with complete morning remissions. The wound was quite healed by the end of the third week. The after-history of this patient will be watched with much interest.—*British Medical Journal.*

Four Years' Study Required by Pennsylvania.—The medical profession of Pennsylvania have worked long and hard to get a law regulating medical practice. But they have got it at last: On Tuesday, April 4th, there was finally passed by the Legislature a bill establishing a Medical Council and three State Boards of Medical Examiners. The members of the boards are to be appointed by the Governor from certified lists of members of the several medical societies, and each board will examine the candidates in its own "school." Applicants must have studied medicine for at least four years. The work of the Boards of Examiners is to be supervised by a Medical Council, to consist of the Lieutenant-Governor, the Secretary of Internal Affairs, the Superintendent of the State Board of Health, together with the Presidents of the three Examining Boards.

Concealment of Vital Statistics.—A bill is now before the New York State Legislature the purport of which is to keep the health-department records secret. The reasons given for the measure is that many facts about births, deaths, etc., are of a private and personal nature (alcoholism, insanity, etc.); that in many marriages secrecy is desired; that blackmailing is fostered by the publication of some facts; that families suffer from proclamation of the existence of cases of contagious disease, and many other equally specious excuses.

Birmingham and the Cretans.—Mr. Lawson Tait is credited with saying that there is no place like Birmingham for liars, the proportion of the lying to the truthful being as three to one. We are reminded of the ancient syllogism, "Epaminondas says that all Cretans are liars; now Epaminondas was a Cretan, hence a liar; hence his statement is untrue; hence he is not a liar," etc.

Increase of Medical Practitioners in Great Britain and Ireland.—The *Medical Register* for 1893 shows that no fewer than 1,513 newly-qualified medical practitioners registered their names, against 1,345 in the preceding year. This is the largest number ever added in any year since 1876, when the statistics first became available. The highest previous total was 1,531 in 1887. The total number of practitioners on the *Register* is thus raised to 30,590, as compared with 22,200 in 1876. This immense increase has taken place in spite of an average annual mortality of 569, and an average annual removal from all causes of 834 names. The increase has affected all the three kingdoms; the number registered in 1892 in England was 749 against 683 in 1891, and an average for the previous five years of 669: in Scotland, 581 against 502, and an average of 487; and Ireland, 193 against 160, and an average of 166.

The Ophthalmologists in Tokio, whose number is more than sixty, have recently organized a social scientific society, and held their first meeting in February last.

Three Cases of Biliary Calculus; Autopsy and Operation; Success.—This is the title of a communication published in *L'Union médicale du Canada.* Not having read the entire article, we are not in a position to state whether the "success" referred to by the surgeon should be credited to the operation or to the autopsy, or to both.

Teucrin, an extract of Teucrium scordium, or water-germander, is a dark-brown fluid, having a garlicky odor and pungent taste. It has been employed by Dr. Mosetig (*Deutsche Medicinal Zeitung,* No. 14, 1893), by hypodermic injection, in the treatment of cold abscesses, tuberculous glands, carcinomatous nodules, lupus, and actinomycosis. The effects are general and local. Soon after the injection the temperature rises, and there may even be a slight chill, but there is usually no loss of appetite or other disturbance, and the constitutional symptoms pass away rapidly. In many cases the local effects were most gratifying, the abscesses, enlarged glands, etc., being markedly reduced in size, and often disappearing entirely.

Reviews and Notices of Books.

MATERIA MEDICA, PHARMACY, PHARMACOLOGY, AND THERAPEUTICS. By W. HALE WHITE, M.D., F.R.C.P., Physician to, and Lecturer on Materia Medica and Therapeutics at, Gray's Hospital, London; Examiner in Materia Medica to the Conjoint Board of England; Author of a Text-book of General Therapeutics. Edited by REYNOLD W. WILCOX, M.A., M.D., LL.D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital; Assistant Visiting Physician to Bellevue Hospital, etc. Philadelphia: P. Blakiston, Son & Co. 1892.

THIS is a well arranged, concise, and handy work on materia medica, excellent as a reference manual or as a text-book for students attending lectures on the subject. The book has been brought rather prominently before the public by reason of a complaint by the author against the American editor. The former alleged that the editor had, unknown to him, incorporated with the original text certain statements which seemed to be, and had been, quoted publicly as those of the author, for there was nothing to indicate that they were the editor's insertions. This is certainly most unfair to the author, as no man would want to father blindly the opinions of another, or to be held responsible for statements he had never made and never would make. It was, of course, necessary to edit the work in order to make it of service to American readers, but there is an unwritten literary code of ethics which condemns utterly and absolutely such treatment as the author of this book has been subjected to. There should have been at least some means of distinguishing between the original text and the additions, but there is nothing in the whole book after the preface to lead one to suppose that every line of it is not from the pen of Dr. White. This is certainly reprehensible, and we cannot but sympathize with the author who appears to have such just grounds for complaint.

TRATADO PRACTICO DE ELECTRICIDAL EN GINECOLOGIA. Par el DR. EGBERT H. GRANDIN y el DR. JOSÉ H. GUNNING. Traducida y Anotada par el DR. RAMÓN MARTIN GIL, Ex-Medico de Sanidad de la Armada, par oposición; Médico-Director del Hospital Noble, etc. Málaga: Fausto Muñoz. 1892.

THIS is a Spanish translation of the work on Electricity in Gynecology by Drs. Grandin and Gunning. The translation was made by Dr. R. Martin Gil, of Malaga, a gynecologist of deserved reputation, who is almost as well known here and in England as in his own country. The American illustrations are reproduced, and the original text is enriched by numerous notes by the translator. As a preface, Dr. Gil has given a translation of a monograph by Dr. Thomas Keith, of Edinburgh, entitled "The Treatment of Uterine Tumors by Electrity; Its Effect on Small Tumors."

O VLIYANII METEOROLOGICHESKIKH USLOVII NA PROIZVEDENIE KRUPOZNAGO ILI VOLOKNINNAGO VOSPALENIYA LEGKIKH. DR. P. I. KOLSKAGO, Moskva; 1892.

THE INFLUENCE OF METEOROLOGICAL CONDITIONS IN THE ETIOLOGY OF CROUPOUS OR FIBRINOUS PNEUMONIA. By DR. P. I. KOLSKY, Moscow, 1892.

THE author of this work, while not denying the action of the pneumococcus in the production of pneumonia, yet believes that meteorological influences are of much greater moment in the etiology of this disease than it is now the fashion to admit. In support of this view, he has undertaken an elaborate comparison of the morbidity statistics of pneumonia in Moscow during the past twelve years, with the recorded meteorological conditions during the same period of time. He finds that the disease is most prevalent in those years in which the meteorological conditions are most divergent from the normal for the season under consideration, and also that the most favorable condition for the development of pneumonia is present when the temperature varies within certain rather narrow limits above or below the freezing-point. As a corollary of this, it is noted that the disease prevails especially during mild winters when the temperature is not low but remains with more or less regularity at about 0° Centigrade. Catarrhal troubles are also most common during such abnormal seasons. The influence of atmospheric humidity was not definitely determined, though extremes both of humidity and of dryness seem to favor the production of the disease. High winds do not seem to be of particular moment, as Dr. Kolsky found that pneumonia was not especially prevalent during winters characterized by high winds. A combination of low temperature, high barometer, and not very strong northerly winds would appear to produce the atmospheric conditions most favorable to a prevalence of pneumonia.

The work, which is Dr. Kolsky's inaugural thesis for the doctorate degree, is a most exhaustive one and is the result of a vast amount of dry statistical research, and is an evidence of the possession by the author of tireless energy and boundless capacity for labor. It is a really valuable contribution to the etiology of pneumonia, and it is a pity that it is written in Russian and is, therefore, literally, a sealed book to the medical practitioners of the rest of the world.

TEXT-BOOK OF EMBRYOLOGY OF MAN AND MAMMALS. By DR. OSCAR HERTING, Professor Extraordinary of Anatomy and Comparative Anatomy; Director of the Second Anatomical Institute of the University of Berlin. Translated from the Third German Edition by EDWARD L. MARK, Ph.D., Hersey Professor of Anatomy in Howard University. With 339 figures in the text and two lithographic plates. Pp. x., 670. London: Swan, Sonnenschein & Co. New York: Macmillan & Co. 1892.

DR. MARK has rendered a great service to those who are not familiar with German embryological terms by his smooth translation of this well-known work, which is by no means light reading in the original, since the author is concise and not always as clear as he might be. The book consists of two parts, the first (containing thirteen chapters) dealing with "the initial processes of development, and the embryonic membranes," the second (four chapters) with the "origin of the separate systems of organs." The author calls attention to the fact that his treatise deals with comparative embryology, rather than with the development of a single organism. For the benefit of advanced students at the end of each chapter there is a full bibliography. The illustrations are numerous and are unusually fine and clear. The work of the translator is of a high order of excellence, since he not only renders difficult German into readable English, but has succeeded in preserving to a great degree the peculiar terse, epigrammatic style of the original. The paper, typography, and binding of the book are above the average.

FINGER PRINTS. By FRANCIS GALTON, F.R.S., etc. London and New York: Macmillan & Co. 1892.

THIS most interesting work is devoted to a study of the various patterns formed by the arrangement of the papillary ridges on the bulbs of the fingers. The author was led to pay particular attention to these markings some years ago when preparing a lecture on personal identification. His investigations at that time convinced him that the subject was one of real importance and deserving of serious scientific study. He has found, among other things, that these patterns, while of almost infinite variety, are yet capable of classification and of being so arranged according to their chief characteristics as to be easily indexed. It has been found also that, although there may be some slight change in certain lines, the individual peculiarities of the patterns, taken as a whole, remain unchanged through life, and thus furnish an exceedingly

accurate, if not unimpeachable, means, far surpassing in reliability personal measurements and other methods in vogue, for establishing the identity of recruits, prisoners, or members of other large bodies of men.

After giving a brief history of the ceremonial employment of finger prints among various nations, and of their official use by Sir William Herschel in India as a means of identification of Coolies, the author describes the method of printing and of enlarging by photography and otherwise. After this the various patterns are studied and classified, the question of the persistence of the markings is discussed and decided in the affirmative, and finally the value of finger prints as a practical method of personal identification is shown. Other questions cognate to these main points are introduced and treated in the author's easy style. Numerous well-executed illustrations serve to elucidate the text. The book is novel, entertaining, and practical, and must be regarded as an unusually valuable contribution to anthropometric literature.

Diseases of the Lungs, Heart, and Kidneys. By N. S. Davis, Jr., A.M., M.D., Professor Principles and Practice of Medicine, Chicago Medical College; Physician to Mercy Hospital; Member American Medical Association, Illinois State Medical Society. Pp. 353. Philadelphia and London: The F. A. Davis Co. 1892.

This book, which is one of the Physicians' and Students' Ready Reference Series, was elaborated from lectures by the author. It is clear and concise. The subject of treatment is especially full, and the author states that he has purposely avoided controversial topics, and may, perhaps, have often "stated positively what is rather probably than positively true." Students will appreciate the book.

Moisture and Dryness, or the Analysis of Atmospheric Humidities in the United States. By Charles Denison, A.M. M.D., Professor of Diseases of Chest and of Climatology, University of Denver; Author Rocky Mountain Health Resorts; Annual and Seasonal Climatic Maps of the United States, and Reports to the A.M.A., International Medical Congress (1876), etc. Pp. 30. Chicago: Rand, McNally & Co. 1885.

The well-known author of this work has given a large amount of information in a small space, with the object of proving that dryness and elevation are the most important elements in the climatic treatment of phthisis. He treats of variability versus equability, gives a rule for classifying climates as to dryness and desirability based upon low absolute and relative humidities and preponderance of sunshine, discusses the influence of elevation, sunshine, cold, etc., in producing desirable dryness, and the physical effect of dryness on man. Maps and statistical tables contribute to the value of the work.

Annual Message of Benjamin J. Baldwin, M.D., President of Medical Association of State of Alabama. 1892.

Dr. Baldwin emphasizes the necessity for a longer course of instruction in the Southern and Western medical schools, and treats of a variety of topics of interest to the members of the association.

A Gas-producing Bacillus Capable of Rapid Development in the Blood-Vessels after Death. By William H. Welch, M.D., Professor of Pathology, and George H. F. Nuttall M.D., Ph.D., Associate in Bacteriology and Hygiene, Johns Hopkins University. Pp. 29.

In this paper the authors report a series of experiments with a bacillus discovered in the body of a patient who died from the rupture of an aneurism. They believe, as a result of their work, that this bacillus may account for some of the mysterious cases in which gas or air, not attributable to post-mortem decomposition, is found in the blood-vessels after death, and have named the microbe bacillus aerogenes capsulatus. A report of their further experimentation will be looked for with interest.

Proceedings of the Florida Medical Association. Pp. 128. Jacksonville: Dacosta Publishing House. 1892.

Among other papers in this pamphlet is one treating of the sanitary condition of Havana, Cuba, by Erastus Wilson, M.D. The clayey subsoil, the absence of a sewerage system and the primitive methods of disposing of garbage account in part for the death-rate, estimated at forty. Filth diseases prevail.

Transactions of the Medical Association of Texas. Twenty-fourth Annual Session, April, 1892. Pp. 310. Galveston: J. W. Burson Co.

Besides reports, constitution, by-laws, etc., of the Association, this volume contains many valuable papers, which render it of more than local interest.

Introduction to the Antiseptic Treatment of Wounds. By Victor R. V. Hacker, M.D., Assistant in the Clinic Billroth; Professor in Surgery; Surgeon to the Allgemeine Poliklinic and the Erzh. Sophien Spital in Wien, etc. Translated by Surgeon Captain C. R. Kilkelly, M.B., Army Medical Staff. Pp. 66. London: Percival & Co. 1891.

The details of the system followed by Dr. Billroth and his staff are given in this small volume, which is condensed, practical, and to the point.

Anæsthetics. By Dudley Wilmot Buxton, M.D., B.S., Member of Royal College of Physicians; of Royal College of Surgeons, England; Administrator of Anæsthetics and Lecturer in University College Hospital, National Hospital for Paralysis and Epilepsy and Dental Hospital of London, etc. Pp. 216. Philadelphia: P. Blakiston, Son & Co. 1892.

This book, written to demonstrate the fact that the subject has a scientific as well as a work-a-day aspect, is both valuable and interesting. A short history is given of the introduction of chloroform and ether, while the preparation of the patient, physiological action and administration of the various anæsthetics, and the treatment of accidents resulting from their use, are fully and carefully described.

Medical Jurisprudence and Toxicology. By Henry C. Chapman, M.D., Professor of Institutes of Medicine and Medical Jurisprudence in Jefferson Medical College of Philadelphia; Member of College of Physicians of Philadelphia; Academy of Natural Sciences of Philadelphia; American Philosophical Society and Zoological Society of Philadelphia. Pp. 229. Philadelphia: W. B. Saunders.

This book is designed to assist physicians who may be called upon to give medical expert testimony in court. In a simple, clear style, the author gives information which should be possessed by all physicians. There are thirty-six illustrations in the volume, some of which are colored.

Text-book of Ophthalmology. By Dr. Ernst Fuchs, Professor of Ophthalmology in the University of Vienna. Authorized Translation from the Second German Edition by A. Duane, M.D., New York. New York: D. Appleton & Co. 1892.

This work is a very valuable addition to ophthalmological literature, and Dr. Duane has rendered a genuine service to English speaking physicians by his faithful translation. The first part of the work, dealing with objective examination and functional testing, is not up to the average of the rest of the volume, but we can commend especially the first three chapters of part second which treat of the

anatomy and pathology of the conjunctiva, cornea, and sclera. All the diseases affecting these membranes, even some of the rarer forms, are here discussed at length and illustrated by accurate drawings. Special attention is given to the microscopical anatomy of these parts. All ophthalmologists, however, will not accept fully the author's views on the etiology of pterygium. Chapter IV. deals with the anatomy and physiology of the uvea and with the embryology of the eye, and the remaining chapters contain descriptions of glaucoma and of the diseases of the media and fundus. The various theories regarding the cause of increased tension in glaucoma are discussed at length. Another part is devoted to the subject of refraction, the various abnormalities and optical errors receiving extended notice, and the work terminates with a description of selected operations upon the eye and its appendages. This part is not as fully illustrated as it might be. The principal defect in the work is the superficial mention of, and at times absolute silence in respect to, the treatment of various affections. Although the book can therefore not be regarded as a complete treatise on ophthalmology, it is, nevertheless, excellent as a work of reference, and as such we do not hesitate to recommend it to students and practitioners of this branch of medical science.

De la Cataracte. Par le A. Ferret, M.D., Ancien Chirurgien de l'Hospital de Meaux, et de la Clinique Nationale Ophthalmologique des Quinze-Vingts de Paris. Paris: Société d'Editions Scientifiques. 1892.

The history of cataract dates from ancient times, and is very interestingly narrated in this little treatise. The various operative measures of the Greeks, Hindoos, and Arabs are well described, and then the author carries us gradually through the Middle Ages, traversing the continents of Europe and Asia, until, at the beginning of the eighteenth century we are brought to France where the nature of cataract is elucidated by Brisseau. After this follows a description of Daviel's performance of the flap operation. This method was accepted by many, although the old process of couching still had adherents, and these two methods were employed until Von Graefe's time, when linear extraction gained the ascendant. The modified linear soon replaced the simple linear operation, which former the author believes to be similar to the old flap extraction of Daviel. The author inclines to the belief that couching (abaissement) has been too generally abandoned.

The work terminates with a few chapters on the etiology and prophylaxis of cataract. The entire subject is treated by M. Ferret from a purely French standpoint, the progress made by other nations being almost entirely disregarded. To those desiring information concerning the technique, application, and successes of modern operations this treatise is hardly satisfactory.

Napheys's Modern Therapeutics. Vol. I., General Medicine and Diseases of Children. By Allen J. Smith, M.D., and J. Aubrey Davis, M.D. Ninth Edition, revised and enlarged. Philadelphia: P. Blakiston, Son & Co. 1892.

This volume has been carefully arranged, giving the therapeutics of each disease, citing many authors, and presenting a great number of prescription formulæ. Most of the favorite prescriptions published in all languages of the world by all recognized authorities have been copied. The section devoted to the treatment of diseases of children will be found especially useful. The treatment of the acute infectious diseases has been carefully considered; so also the management of all other infantile disorders.

Two Centenarians.—A man named Connor Ryan died recently in County Tipperary, Ireland, who was born in 1780. He took an active part in the rebellion of 1798. His wife, to whom he had been married eighty years, died six years ago, at the age of one hundred.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 6, 1893.

D. B. St. John Roosa, M.D., President, in the Chair.

Election of Trustee.—Daniel Lewis was nominated. Dr. F. A. Castle nominated the President, Dr. Roosa, and said that although it had been the custom for the President to act *ex officio* as trustee, the validity of this from a legal point of view had been questioned, and in order to avoid the possibility of any complication growing out of the matter he thought it wise to elect him trustee.

The President said he did not take that view of the case. He had acted as trustee *ex officio*, and proposed to continue to do so, and he would not accept the nomination. Dr. Cheesman was nominated, but sent word that he could not serve because of ill health. The nominations being closed, Dr. Lewis was then elected.

Pilocarpine, its Physiological and Therapeutic Action, with Exhibition of Specimens Showing its Effect in Changing the Color of the Hair.—Dr. D. Webster Prentiss, of Washington, read the paper. He regarded pilocarpine as the most important drug added to the materia medica in 1880. For several years he had been much interested in the study of its therapeutic effects, and especially in its action in causing a change of color or a growth of the hair. In the matter of changing the color of the hair, his experience in one case had been unique. The patient was a girl, twenty-five years of age, weight about ninety pounds, who about five years ago had suppression of urine, days passing without any being obtained even with the catheter. When he began the use of pilocarpine there were marked symptoms of uræmia, short of convulsions. Failing to produce sweating by the pack, etc., he tried infusion of jaborandi by the stomach, but it was rejected, and he then injected subcutaneously one centigramme of pilocarpine, and during two or three days injected altogether about forty centigrammes. The effect was characteristic, being in accord with that described in the books, only that the secretions were unusually large, especially from the stomach, and the hair changed its color and became coarser. He estimated the total loss of fluids by the skin, salivary glands, stomach, and intestinal and bronchial mucous membrane at fourteen pounds. Some would imagine this an over-estimate, but the patient and nurse thought it was the reverse. The thumping of the heart in this case could be heard at a distance of six feet. Vision grew dim. The patient would soon fall asleep, and would awake greatly relieved from the headache and other uræmic symptoms. Doubtless the excretion of urea in the sweat, etc., had been great. The pupils contracted to the size of a small point. This patient recovered and was still living. The case was also an extremely interesting one from the fact that the hair, which had been a light brown, began rapidly to change its color to dark brown and went on to become black. It also became coarser and thicker. This was true of the hair on the head and all parts of the body. A similar effect of pilocarpine on the hair, though in a less degree, had been recorded in two other cases. The drug had also been used to promote the growth of hair, especially in alopecia, a few instances being cited in which marked success had been reported. In the latter part of the paper the author cited opinions and cases bearing on the questions whether it was possible for the hair to change its color suddenly, what was the cause, the microscopical changes, the effect of food and climate upon the color of the bones, feathers, and scales of animals, and exhibited specimens from birds and animals illustrating this change of color, the specimens having been loaned him from the National Museum at Washington. It was beyond doubt, he said, that the hair of man

had at times within a day changed its color from dark to white. The change began in the tip, and when examined such hair was found to contain air, the entrance of which had been explained on two theories, namely, chemical change in the interior of the hair, forming gas, and entrance of air from without to fill the void left by interior changes.

A schema was presented of the physiological and therapeutic action of pilocarpine. Pilocarpine was obtained from the pilocarpus of Brazil, and it was a notable fact that jaborin, an alkaloid obtained from the same leaves, had exactly the opposite effects upon the system. It acted like atropine. This showed the necessity for a pure specimen in therapeutics. The principal physiological action of pilocarpine was as a sudorific; next, as a stimulant of accommodation of the eye, contracting the pupil; it was also a stimulant to the hearing apparatus and to the growth of the hair. Its most important therapeutic use was as a sweat producer; secondly, in diseases of the eye and ear, and in promoting the growth of the hair. Its greatest drawback and danger related to its depressing action upon the heart. It was an antitode for atropine poisoning.

The Question of a House Committee Referred to the Council.—Dr. Daniel Lewis, who had proposed an amendment to the by-laws, providing for a House Committee of three to be appointed by the Council, each member to serve three years, was requested to explain the object of the proposed amendment, and said it was to have simply an authorized House Committee, whereas, heretofore, such a committee might have existed and it might not, depending upon the will of the Council. One might, with the existing arrangement, consult with this floating committee to-day, and to-morrow not find it in existence.

Dr. A. Jacobi wished to know whether this proposed amendment to the by-laws had been approved by the Council. As it seemed the Council had not had an opportunity to express an opinion upon it he thought the matter should be submitted to the consideration of the Council before action was taken. He believed that instead of objection having been found to the present arrangement, because of the instability of the House Committee, it was rather because of its eternity—that it was too stable.

After some discussion and apparent opposition, the motion was referred to the Council to be reported upon at the next meeting.

Report of the Committee on the Protection of the Water-Supply of New York City.—The report was read by Dr. J. West Roosevelt, and recited the arguments presented by the Committee before the Senate Committee in opposition to the passage of the Webster Bill and what it had done to have supplemental legislation since the Webster Bill had become law. The Committee had also been heard by the Mayor of New York and the supplementary bill had received his approval, except that he would not have the law carried out by a scientific commission instead of, as at present, by the Commissioner of Public Works. The supplemental bill with this one markedly objectionable feature had been brought before the legislature, but would have to take the usual course owing to objection by one member, Fish, from Putnam.

After remarks had been made by several gentlemen, the following resolution was adopted: *Resolved*, That in the opinion of the New York Academy of Medicine the preservation of the purity of the water-supply is of vital importance for the protection of the city from a very serious visitation of the cholera. The subject can only be dealt with by sanitary experts and engineers who can bring to bear upon all measures adopted for the purpose the knowledge derived from experience of other countries and cities which have had to deal with the prevention of water-pollution. The Academy of Medicine regards any measure which, like the Webster act, looks principally to the purchase of real estate contiguous to, or at the source of water-supply, as demonstrated to be insufficient and needlessly expensive. Therefore the Academy of Medicine cannot sanction the proceedings of the Commisioner of Public Works, which look principally to the purchase of land, but believes that the sanitary care of the watershed should be entrusted to a properly constituted commission so composed as to insure public confidence that the steps shall be in accord with the principles and practice of sanitary science.

SECTION ON SURGERY.

Stated Meeting, March 13, 1893.

Joseph D. Bryant, M.D., Chairman.

Congenital Cystic Tumor of the Coccygeal Region—Probably Enterocystoma.—Dr. Howard Lilienthal presented a young man, whom he first saw two months ago, when he gave a history of having been born with a tumor over the coccygeal region. The mass was covered with skin, and physicians were consulted about removing it, but none wished to interfere. It increased in size in proportion to the growth of the patient. A few weeks before Dr. Lilienthal saw him the growth had become tense, of about the size of a small orange, and began to pain him. Two days before he saw him an opening formed about the size of a pin and fetid material flowed out. When seen by Dr. Lilienthal the mass looked like a scrotum, was situated over the coccyx, pink in color, wrinkled, covered sparsely with hairs, contained a small opening from which a bad-smelling fluid, looking like pus, escaped, which under the microscope showed pus cells. He suggested enlargement of the opening and removal of the whole mass, and later did this under cocaine. Among things thought of were some sort of cyst, spina bifida, dermoid cyst, etc. On cutting into the sac and introducing his finger, he entered apparently a bottomless cavity. It was behind the rectum, did not open into the gut, only the walls of the rectum seemed to intervene between the cavities of the gut and cyst. The finger entered the cyst, as far as he could reach, along the anterior border of the sacrum. There was apparently normal lining, mucous membrane in the cavity and at the external opening, the latter, having partly closed since the operation two months ago, admitted the end of the finger. It seemed to be an enterocystoma, a very rare condition, though not unknown.

Dr. R. T. Morris thought the cavity might be closed by dissecting out the entire mucous membrane, and Dr. Lilienthal said this had been suggested as the only radical cure to the patient, but as it would be an extensive operation, and the patient was not troubled by the condition at all, he did not care to submit to it.

Report of Twenty-nine Cases of Ingrowing Toe-nails Operated upon by Anger's Method.—Dr. C. N. Dowd read the paper. A great many patients visiting dispensaries, suffering from ingrowing toe-nail, could not be treated successfully by any method which did not imply radical cure. To them, too, it was important the procedure should be adopted which implied least confinement. Anger's method fulfilled these conditions, yet inasmuch as it had been little employed in this country the author thought it well to report a number of dispensary cases so treated. Anger had employed it a good many years ago, using salt and ice for anæsthesia, and did not suture the wound, and therefore healing was more prolonged. The procedure consisted in dissecting out the side of the nail which was affected, back far enough to include the matrix, for it had been shown that from this covered portion the nail had its growth. The overlying soft structure was dissected back, after making a longitudinal incision which split the nail from forward back beyond the matrix, the narrow strip of nail was dissected off, the exuberant tissue removed, a few sutures inserted, the toe dressed, slight pressure exerted, the patient then being allowed to go home. Usually he could go about some during the healing process, which was likely to be complete in two weeks. Cocaine anæs-

thesia was employed. Strict asepsis was important, although difficult to carry out. Four or five of the patients complained of severe pain the first night, but aside from this fact, and the further fact that in two or three there was subsequently some further growth of the nail, due to incomplete removal of the matrix, there were no incidents worthy special mention. In ten the healing was by first intention, in nine there was slight granulation, in four suppuration; nearly all could walk perfectly well almost immediately after the operation, and the final cure had been complete.

Dr. Reginald H. Sayre had not found it necessary to resort to so formidable an operation in ingrowing toe-nail. By using the cautery on exuberant granulations, placing cotton under the edge of the nail to prevent it from chewing into the skin, regulating the shoe, etc., he had relieved his patients without operating.

Dr. Kammerer had been in the habit of excising the whole nail in hospital practice as the most efficient way of dealing with ingrowing nail in the laboring classes.

Does Emmert's Operation.—Dr. Willy Meyer was accustomed to doing the operation of Emmert, of Berne, consisting in removing all the soft parts to back of the nail on the side of the toe which gave the trouble, thus leaving no flesh into which the nail could cut and cause pain. The operation was done, as in Anger's, under cocaine, and made bloodless by rubber constriction above. The wound was an open one, there were no flaps which could suppurate, and he thought the procedure equal, if not superior, to Anger's. It required about five weeks for complete healing, but the patient was able to go about meanwhile. The operation, which had been spoken of as Cutting's, was essentially the same as Emmert's.

Dr. B. F. Curtis had tried various methods, and thought that where the chances of obtaining primary union were good Anger's was best, as it healed quickest; but if one were in doubt about obtaining primary union he would do Cutting's, which, as Dr. Meyer had said, was like Emmert's, only a portion of the matrix was also removed with the strip of soft tissues.

Dr. Lilienthal thought Anger's operation best in private practice, Cutting's in dispensary practice. The super-crinolin, recommended by Van Arsdale, was extremely serviceable as a kind of splint in these operations.

The Chairman said that, like Dr. Curtis, he had done every form of operating for ingrowing toe-nail, in times past, even to pulling out and burning the matrix, a procedure which he regarded as the ecstasy of cruelty. On the whole he had got the best results from Anger's method.

Cases of Bone Implantation and Transplantation for Cyst of Tibia, Osteomyelitic Cavities, and Ununited Fracture.—Dr. B. Farquhar Curtis read the paper. It treated of those methods of dealing with losses of bone substance by the introduction of living or dead solid material or Schede's blood-clot. Solid materials used for this purpose were classified as follows: 1. Foreign substances: *a*, non-absorbable, such as various metals, celluloid, plaster of Paris; *b*, absorbable, such as catgut, Halstead's fibre, sponge, decalcified bone, simple dead bone, ivory. 2. Living bone: *a*, from another species; *b*, from the same species or the same individual.

Ultimate success was most difficult to obtain with the least absorbable The non-absorbable remaining unchanged, were ever a source of danger from slight injury, etc. Absorbable substances were inserted to give temporary support, or to provide a sort of scaffolding for the new tissue to grow in. The substances used varied in solidity from catgut to ivory, but even the latter was slowly absorbable. Catgut was so absorbable that it was little better than blood-clot; Halstead's fibre was difficult to prepare; decalcified sponge was not always absorbed. Senn's decalcified bone appeared for the present to be the most practical in ordinary cases. This could be made aseptic, and also be impregnated with iodoform when introduced, which gave assurance against germ development, in that regard having an advantage over blood-clot.

Four cases were related. The first was one of cyst of the tibia in a boy, aged eighteen, who had had a broken leg when four or five years of age, and for four or five years before the operation performed by Dr. Curtis had had severe pain in that leg; was treated for rheumatism, was in bed a year. He then was operated upon by Dr. Curtis, the only symptom being severe pain in the head of the tibia. The periosteum was found not at all thickened. A few strokes of the chisel opened the thin roof of a cavity just below the tuberosity of the tibia, the size of a small hen's egg, the walls smooth, lined with a thin layer of granulation tissue, and containing clear serum, no pus. The bone showed no disease. November 5, 1891, Dr. Curtis filled the cavity with decalcified bone chips sprinkled with iodoform, packed in tightly, the skin united over them, no drainage. Primary union was obtained except for a small sinus. December 24th, the patient was discharged. He was seen in January, 1893, and said the sinus remained open until March, 1892, discharging a little serum, but never any solid particles, then it healed spontaneously, and he had been in excellent health since, and walked freely without pain. The scar was smooth, linear, not adherent to bone, the surface of bone smooth and hard. It would seem the process in this case had been old inflammatory, with simple serous collection, or serum remaining after absorption of pus.

The second case was one of osteomyelitic abscess of the humerus, which was treated by evacuation, and later by implantation of bone. It occurred in a boy, aged thirteen, who was seized with great pain in the humerus two weeks after having been struck on the shoulder by a stone. There was no trace of the injury, but there was fever, loss of appetite, helplessness in the arm, etc. On cutting into the apparently healthy bone an abscess cavity was found, extending from above the middle of the shaft into the head. The musculo-spiral nerve was accidentally divided, and it was intended to unite it when the operation of filling the cavity with decalcified bone should come up in a few days, but the boy went out and did not return for about three months. The cavity was then exposed, curetted, and filled with decalcified bone chips and iodoform, the musculo-spiral nerve-ends were found, freshened, and united. Primary union took place. Return of function in the paralyzed muscles was first observed six months later, and after a year was about perfect. Now one could hardly observe any difference between the two arms except for the scar and slight difference in size.

The third case was one of osteomyelitis of the os calcis in a boy of thirteen, who had sustained a sprain, resulting in inflammation. Incision had been made, sinuses formed which led to dead bone. Dr. Curtis removed the broken-down interior of the os calcis by curette, leaving only a shell of periosteum and cartilage, and after two months packed the cavity with decalcified bone chips and iodoform, and sutured the incisions. Primary union was obtained, no sinuses formed, the boy began to use the foot in about a month. The boy now considered the foot about as sound as ever.

Dr. Curtis had had no experience with the method advocated by Kummell and Le Dentu of inserting large pieces of decalcified bone, filling the entire gap with one piece, but he thought it would be more liable to infection, in which case the whole cavity would again have to be cleared.

The fourth case was one in which living bone was employed to fill the gap, thus illustrating transplantation of bone, the other cases having been instances of implantation. The man, thirty-three years of age, had sustained a fracture of the tibia, fibula, and femur, in January, 1891. Necrosis at the tibia occurred, there being a gap of two inches when he entered St. Luke's, about six months later. The femur shortening was about two inches, and to bring the tibial ends together would have shortened the leg altogether four inches, hence it was thought best to fill the gap with a piece of bone from the fibula. It

was intended to fill the oblique gap with about an inch of the fibula, leaving its periosteum attached, but there had been fracture of the fibula at this level, and, owing to brittleness, it broke, so that fragments had to be used. Some, perhaps, remained attached to the periosteum, but most of them, doubtless, were isolated. They were not taken out of the wound, but were passed directly across to the opening of the tibia. After some experience with a sinus, the patient was able in about six months to act as a guide in the Adirondacks, carrying his boat as much as five miles at a stretch. The steps to secure asepsis during the operation were mentioned.

Dr. Thomas H. Manley presented specimens of bone from an ununited fracture of the tibia in which he took out the necrosed ends, exsected a piece of the fibula to make it correspond in length—a case to which reference has been made in the report of a recent meeting of the County Medical Association.

Dr. R. T. Morris had filled considerable cavities of bone with fresh blood-clot, and although he had feared breaking down and septicæmia, he had always succeeded in avoiding this.

Dr. Samuel Lloyd had tried to fill in bone cavities or spaces in several patients by the use of decalcified bone, but had not succeeded. He was unable to explain the failure, unless possibly the bone had not been sufficiently decalcified so that some cause for sepsis existed within.

Dr. Kammerer had had no experience with decalcified bone because he had been well satisfied with blood-clot. The decalcified bone would have to undergo absorption anyway. He thought periosteum of greater importance in the transportation of bone than Dr. Meyer seemed to think. It had greater vitality than almost any other connective tissue of the body.

Dr. Manley had noticed that Dr. Curtis's patients were young, and he queried whether, if periosteum was preserved the cavities might not have filled up just as well without putting anything into them after curettement and cleansing. He seemed to doubt whether the bone-chips would do so well in adults, and unless they underwent absorption they would cause irritation and mischief.

Dr. Willy Meyer had had success with blood-clot in filling smaller bone cavities, but not in the large ones of the femur, and it would be a marked advance if these cases could be treated successfully by bone chips or otherwise. He referred to the method practised at Trendelenburg's clinic of enlarging the cavity in diseased small bones, as the metacarpal, by the cautery, suturing the skin over them, and thus obtaining primary union.

Dr. Coley had had care of two cases of transplantation of bone from the dog for two or three months, at the end of which time they had to be removed from the cavity. In introducing decalcified bone it was a question how much the success was due to the presence of this material and how much to blood which filled the interspaces. He was disposed to think that blood-clot would give all that could be gained.

Dr. Jones had had considerable success with blood-clot, but thought if decalcified bone would prove as successful in other respects it would possess the advantage of shrinking less than blood-clot.

The Chairman had been in the majority of instances entirely successful with blood-clot, and when not successful it was because the cavity had not primarily been thoroughly cleaned out. He had never had but one failure in the use of bone-chips. His first experience with transplanting a large piece of bone occurred eight years ago, when he used about an inch and a half of the tibia of an amputated leg to fill the gap in another. But the anterior part of the transplanted piece had not its periosteum, having previously been the seat of disease, and only the posterior part became attached, but this portion retained its vitality four weeks before, finally, separation took place and the transplanted piece came away. The case illustrated the point made by Dr. Curtis, that if small pieces were used failure of a part to unite would not require the removal of the whole.

Dr. Curtis, in some closing remarks, said one of the greatest difficulties to overcome was to get a perfectly aseptic cavity to put the bone into.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

MALIGNANT GROWTHS AND PARASITES—POLYPUS OF THE URETHRA—PERINEAL SECTION—IS GERMAN MEASLES A DISTINCT DISEASE?—HYPNOTISM AND MESMERISM—HOSPITAL VACANCIES IN LONDON—CHOLERA—ANTI-CHOLERA VACCINATION—HAFFKINE'S RESULTS CHALLENGED BY KLEIN—THE ANIMAL CELL—HALLIBURTON'S EXPERIMENTS AND GOULSTONIAN LECTURES—PRACTICAL BEARING OF THE CHEMISTRY OF THE CELL—IRON AND PHOSPHORUS IN CELLS—COAGULATION OF THE BLOOD.

London, March 21, 1893.

The presence or absence of parasites in malignant growths still occupies the attention of pathologists. I have already given an account of Mr. Jackson Clark's important paper, in which he claimed to have discovered ripe psorosperms and similar organisms, not only in epithelioma and other forms of cancer, but also in sarcoma. At the adjourned meeting of the Pathological Society his specimens and conclusions were submitted to severe criticism, but he held that his position was not shaken. Dr. Boyce, who showed for himself and Dr. Giles a series of microphotographs, from a case of cancer of the pancreas, argued that many so-called parasites are in reality merely altered nuclei, and as other stages of the alleged parasites have not been traced there is no sufficient evidence of their nature.

Dr. Woodhead recalled the fact that altered structures had often been mistaken for parasites, but although inclined to admit that parasites were present in cancer, was unable to satisfy himself that Mr. Clark's preparations proved his conclusions. Mr. Ballance exhibited, for himself and Mr. Shattock, microphotographs in support of the views that had been submitted to the Society in 1888. Dr. Ruffer spoke for his collaborators, Messrs. Walker and Plimmer, as well as for himself, objecting to the manner in which Mr. Clark used the term psorosperms, as until the life-history of these parasites had been worked out it was better to use the word protozoa. He had no hesitation in stating his opinion that none of Mr. Clark's preparations contained parasites at all. In replying, Mr. Clark said he held that Virchow's "cells of endogenous formation," as well as the cells with irregular mitoses of cancer and sarcoma described by Klebs and others, were really parasites. He claimed that he had completely demonstrated the process of swarm-spore formation, and since the last meeting he had found in the cells from a duct of a cancerous breast the bodies he had placed before the Society with all the characters of lasting spores of the microsporidia. So closed the first battle of the psorosperms. Others will doubtless ensue, and the conflict between skilled pathologists such as these will doubtless largely contribute to advance our knowledge. Meantime it is a source of satisfaction that these investigations are worthy to rank with those of any other country. Mr. Clark's specimens have been referred to a committee of the Society, appointed to examine and report upon them, and those who differed from him all thanked him for the facilities he had afforded them of examining his specimens at their leisure.

Mr. Bryant described, at the Royal Medical and Chirurgical Society, on the 14th inst., a case of fibrous polypus attached to the floor of the prostatic portion of the urethra, which he had removed by the median perineal operation, which he had undertaken to explore. The polyp was about the size of a haricot bean, and there was a corresponding depression in the upper surface of the

urethra. He pointed out that this polyp could not have been discovered if he had performed the fashionable suprapubic operation. Mr. Harrison and others spoke in discouraging terms of the suprapubic operation, which has not been so successful as was anticipated by some.

At the same meeting Dr. Donald Hood read a paper on "German Measles," which he endeavored to show was only a modified form of ordinary measles. He suggested that the disease may be due to a living organism which was liable to variations according to its environment. The proposition did not meet with any support, although it was admitted that accepted conclusions may be reviewed from time to time with advantage. Sir D. Duckworth, Dr. Pye-Smith, and Dr. Routh maintained the distinct character of German measles, as it always "bred true," had a shorter incubation period, scarcely ever catarrhal symptoms, but was accompanied by enlargement of glands, and subsided suddenly. Moreover, it was remarked that we have no sure evidence that either disease is due to micro-organisms.

Some amusement has been caused by the new exposure of hypnotism as carried on in France. Mr. E. Hart took a trip to Paris and submitted the subjects of Dr. Luys's clinic to control experiments which sufficed to show that these subjects were impostors. Dr. Luys holds an important position as physician to La Charité, and it is with regret that one sees to what an extent he has been duped. New hypnotism is, after all, only old mesmerism "writ large," and of no use as a remedy except, perhaps, in a few hysterical cases. Charcot seems at length to have arrived at this conclusion, but to my mind he is, to no slight extent, responsible for some of the errors of others. At his own clinique there were for years public demonstrations of the most sensational kind on trained subjects, and it was quite a common occurrence in certain circles to go and see Charcot's cases for amusement. His clinique was, in fact, degraded by exhibitions of a sensational kind which I hope no English or American physician of repute would engage in. The subject of hypnotism was sure to be taken up by the newspapers, and has been thoroughly discussed by them. It is a curious commentary, however, on the past conduct of our medical journals to see the reviews occupied by articles on this and other subjects from the pens of medical writers, and among these medical editors who, in their own columns, have held it to be unprofessional to permit one's name to appear in "lay journals." No doubt some of those who have been held up to ridicule or contempt for acquiring publicity through the "lay press" will fail to see why the editor who condemned them should not be judged by his own standard. For their comfort I would remind them of the old proverb, that "One man may steal a horse, but another must not look over the hedge."

There is just now a vacancy on the medical staff of each of the two largest hospitals: the one at the London Hospital, caused by the death of Dr. Anderson; the other at St. Bartholomew's, through the resignation of Dr. Andrew. Besides these important posts there are others of no little value, *e.g.*, at the National Hospital for the Paralyzed and Epileptic, the Samaritan Free Hospital, and the Evelina Hospital for Sick Children. There are also some very valuable minor appointments, such as registrarships, at present vacant.

London, March 25, 1893.

It was not to be expected that M. Haffkine's views on anti-cholera vaccination, which I have already written about (Medical Record, March 4th), would long remain unchallenged, and accordingly on Tuesday last (21st) Dr. Klein brought before the Pathological Society the experiments he has carried on during the last twelve months. He says Haffkine produces immunity—probably only temporary—not from cholera but from the intra-peritoneal inflammation caused by injections of comma bacilli, and that precisely similar effects are produced by other organisms, viz.: the vibrio of Finkler, the bacillus coli, the proteus vulgaris, the typhoid bacillus, and the bacillus prodigiosus. The symptoms of the disease and the pathological changes produced in the guinea-pigs are for all these varieties exactly the same, but the cultivations of bacillus coli, bacillus typhoid, and bacillus prodigiosus are more virulent than the others. The same results follow the injection of sterilized cultures, but the fatal dose of these is a little larger. All these six species of bacteria, Dr. Klein says, produce the same effects, and all contain in their protoplasm the same poison, which produces also the same immunity against Haffkine's "virus fort," which is in itself only an intra-cellular poison, and an animal immunized against it will succumb to liquefied gelatine cultures of comma bacilli, which he presumes to contain the specific cholera poison. Dr. Sims Woodhead said that cholera bacillus injections produced large effusions into the small intestines, which was absent in some of Dr. Klein's experiments—perhaps because the animals died early. He did not think the evidence proved the identity of the intra-cellular poisons. Dr. Sidney Martin thought it strange that any one should suppose cholera could be produced by subcutaneous injection, as it was essentially a local disease of the intestine. Whether exudation occurred or not did not matter, for jequirity injected subcutaneously produced sanguineous and other exudations, as did snake-poison, but this was not cholera. He said Dr. Klein's intra-cellular poison was purely hypothetical, nor was it true to say that all pathological microbes acted through the chemical products they elaborated. As to the protection of one organism against another, might it not be a kind of contagionism? Dr. William Hunter endorsed Dr. Martin's view. The President, Sir J. Lister, thought it startling to hear that so many microbes would protect against Haffkine's strongest virus. Would they do so if that virus were introduced into the intestinal canal? Dr. Ruffer said Haffkine's virus protected against cholera virus introduced into the alimentary canal. Dr. Klein in his reply argued that the intra-cellular poison of different microbes was identical, as each produces the same results. The President's suggestion he would put to the test.

The animal cell has been much to the fore in recent discussions, and Dr. Halliburton, F.R.S., has taken its chemical physiology as the subject of the Goulstonian lectures which he has been chosen to deliver this year. He opened with a lecture on the micro-chemistry of the cell, in the course of which he gave an account of its proteid and other constituents, some suggestions as to the condition in which they are present, and in this connection reviewed the chemical meaning of the staining reactions. He then referred to the detection of iron and phosphorus in the cells—a point of deep interest to practising physicians. Take, for instance, iron—the intake and output of which are both very small, but the presence of which in our bodies is most important. When the hæmoglobin dies and is cast out it does not take with it its mineral wealth, but leaves it as a legacy to the next generation of blood-corpuscles, except a very small portion which may be compared to legacy-duty. As to diet—young mammals enter the world with a store of iron in their liver and therefore thrive for a time on milk, though it is very poor in hæmatogen, but later they must obtain iron from their food or they will become anæmic, as children who are weaned late are apt to do unless the poverty of the milk is supplemented. Again, the very common notion that iron given as medicine is absorbed and supplies that which is needed in the blood, is probably incorrect. In fact there is considerable evidence that iron as such is not absorbed from the stomach or intestines. Physiologists are agreed that the only form of iron compound available for the needs of the body is the complex organic molecule which Bunge calls hæmatogen. How, then explain the undoubted benefit of iron treatment, in the course of which many times the quantity contained in the body is swallowed. Bunge supposes that the sulphide formed carries away an excess of sulphur which occurs in chlorosis, forming sulphuretic hydrogen, and

this gas destroys the hæmatogen. Dr. Halliburton, while stating this view, declined to admit that it contained the whole truth, for it does not account for the limitations of chlorosis in age and sex. Dr. Mott had suggested to him that if Bunge's hypothesis were true, bismuth, which also forms a sulphide, should be as effectual as iron; not only iron but phosphorus has been localized in the cell or its nucleus, a very important result of recent investigations, which is also not without practical bearings.

In his second lecture Dr. Halliburton gave an account of the chemical constituents of cells and their nuclei as the result of investigations with various tissues. The practical value of such investigations is seen in the impossibility of appreciating the phenomena of phagocytosis without a knowledge of the composition of cells. The same may be said as to the question of protective proteids and immunity. They have also led Dr. Halliburton into a renewed investigation of blood coagulation, to which he devoted the third lecture, concluding the course. It was intra-vascular coagulation of which he chiefly spoke, and having discussed the views of Hammarsten, Pekelharing, Wooldridge, and others, he gave an account of his own experiments during the last two years. From these, combined with others, we may conclude that the substances termed at different times, fibrinferment, fibrino-plastic substance, cell-globulin β, serum-fibrinogen, tissue-fibrinogen, etc., are all varieties of one substance which is a nucleo-albumin; and further, that in all cases it is a nucleo-albumin in co-operation with calcium compounds, which brings about coagulation in the blood. The injection of 0.05 of the substance into the jugular vein of a rabbit causes death in a few seconds, "like a lightning flash," the death being evidently due to failure of respiration. An immediate autopsy reveals thrombosis, mostly limited to veins, but sometimes extending to arteries. The heart is still beating, though the right side is full of clot and the left generally empty. The sudden stoppage of respiration and the absence of dyspnœa point to the centre as affected and this is confirmed by severance of both vagi making no difference. Dr. Halliburton found the absence of lecithin from the proteid did not alter the result, so that substance loses the place it has occupied in this respect. The nucleo-albumin can be obtained from cells as diverse as those of the thymus, liver, brain, testis, and kidney. Probably the main proteid constituent of all protoplasm is nucleo-albumin. The bearing of all this is important to the pathologist. To the practitioner who would be glad of a means of arresting hemorrhage or producing clot in an aneurism, Dr. Halliburton emphasized a warning, that the substances with which he had experimented were so immediately fatal that their effect would be "worse than the disease."

PUBLIC NOTICE OF INFECTIOUS DISEASE IN TENEMENTS.

To the Editor of the Medical Record.

Sir: It is at times alarming to note the official bulletins of our Board of Health, and see how many cases of diphtheria, scarlet fever, chicken-pox, measles, and all other infectious diseases exist, while it is well known that hundreds of cases are not reported to the proper authorities by physicians, for fear of official interference. I recently met a physician who stated to me that he never reported contagious diseases, for what he called private reasons, which were that he did not believe in contagion and infection. The active interference of the Board of Health (perfectly proper, I believe) in suspending business and closing stores adjoining a suite of rooms wherein contagious cases exist has led many physicians to avoid reporting cases of, say, diphtheria, as it especially involves a pecuniary loss to the attending physician, and this means everything to a young beginner with a limited practice.

Recently I was called in consultation to a case of septic diphtheria, to intubate, and it was only after I gave a grave prognosis and mentioned isolation, etc., that I was asked if it would not be wise to report the case to the Health Department, owing to the poor chance of saving it. So here it seems only hopeless cases were being reported, and where, meanwhile, a dozen or dozens of adults and children were being constantly exposed to the risk of infection. A week later a second child succumbed, and when I last heard from the family two new cases followed the one I so stringently warned against.

Now the question arises: Can we exterminate these infectious and contagious diseases? I believe we can, but not by simply preaching about the terrible mortality, the necessity of disinfection, but by practising a sort of local quarantine in each and every case and in each and every house.

Our tenement-houses, and I may add, even flats and apartment-houses, as they are being built in different sections of our city—especially, however, in the most densely populated portion on the east and west sides—are veritable hotbeds of infection, and are never exterminated, because there is something lacking. Imagine yourself, to-day, going to the third, fourth, or fifth floor of an apartment-house, are you positive but that you might have passed three or four floors wherein diphtheria and scarlet fever exists? The Board of Health knows it, but it is everyone's business to know it, and it would be necessary to have the Board of Health distribute daily pamphlets containing the location of houses wherein contagious diseases abound, with the floors, names, etc., so that prophylaxis could be properly carried out. We all know that people are apt to visit one another during an illness, in order to console the patient, and in reality the direct result frequently is that the germs of many a scarlatinal case have been disseminated by these friendly callers and taken home by the clothes of the visitor and infected some innocent child. Here is the scheme, of which I was recently informed by Miss Carruthers, of Flatbush, L. I., Hospital, as applied in Toronto, Canada.

Let a large placard bearing the name of the disease, say a scarlet fever card or a diphtheria card, printed in bold type on thick cardboard, with some printed regulations from our Board of Health as to caution and the danger of the transmission of the disease be conspicuously hung in the hall of each house wherein disease is reported, and let there be a fine imposed for the removal of the same except by an authorized health officer. It should be the duty of the health officer visiting such house to give the usual instruction in regard to isolation and disinfection, and to satisfy himself that these cards are not tampered with.

What would the result be? On entering a house wherein such a placard existed many a parent would retreat, and in this way avoid the possibility of infecting some weak and poorly nourished child whose body is a proper nutrient-medium for the cultivation of any disease.

Besides, it would be a new means of introducing vigilance on the part of all people living in that house, for it stands to reason that janitors would be compelled to use the utmost care as to cleanliness, and be called upon to act indirectly for the health of all families by guarding against the spreading of contagion, being constantly reminded of the presence of disease every time they see this disease card.

Louis Fischer, M.D.

40 Rivington Street.

PHYSIOLOGICAL ATELECTASIS.

To the Editor of the Medical Record.

Sir: In the Medical Record bearing the date January 31, 1893, reference is made to transitory dulness at the apices of the lung as observed by Dr. Roenig. You likewise comment on the frequency of the condition.

This phenomenon is evoked by atelectasis or collapse of the lung. It is often encountered as a physiological condition. I have adverted to it in my "Manual of Clinical Diagnosis" (edition of 1891) as follows: "Remembering that the tidal or the breathing volume of the

air amounts to only thirty-three cubic inches, and the complemental air, which is the air taken into the lungs by forced breathing, in addition to the tidal volume, amounts to one hundred cubic inches, and knowing that the average respiratory capacity of an adult is about two hundred and twenty-five cubic inches, the conclusion is evident that even in a state of health the lungs are imperfectly aerated and in a condition of physiological atelectasis. My invariable custom before conducting an examination of the lungs is to have the patient make repeated forced inspirations. In this way I avoid many errors in auscultation and percussion." I have particularized this matter for the reason that I have failed to find similar detailed reference to physiological atelectasis in our text-books on diagnosis. I can recall a large number of cases where an examination of the lungs revealed dulness in one or both apices, and where an unfavorable prognosis was given in accordance with the physical examination. I can also testify with chagrin that these very cases which I considered so unfavorable continued well despite my inauspicious prognostications. These errors in diagnosis are examples of similar errors made by other physicians, and they will continue to be made until pulmonary atelectasis is recognized as a physiological condition. I have repeatedly demonstrated patients to my classes who showed not only circumscribed dulness of the apices or borders of the lungs, but even, in fact, of an entire lung; and it was shown in these cases how, after repeated forced inspirations, dulness was supplanted by resonance.

These cases were not recruited from bedridden individuals, in whom such a condition might reasonably be expected, but from ambulatory patients, exempt from pulmonary disease. This fact demands emphasis, that there is no individual, however resonant his lungs on percussion, who cannot render them more resonant after repeated deep inspirations. If atelectasis is found as a physiological condition in robust individuals, how much more frequent is it in those individuals with incomplete thoracic development who forego all hygienic influences which tend to promote proper respiratory activity. While the majority of patients are able to insufflate the atelectatic areas by forced voluntary breathing, I have observed that a small number of individuals can attain this object only by breathing relatively compressed air by means of a pneumatic cabinet.

The topographical percussion of airless organs varies daily in the same patient according to his position and respiratory activity, both influencing, as they do, the passive and active mobility of the lung borders. It must not be surmised, that the condition of the lungs engendered by forced breathing is one of acute dilatation, inasmuch as the condition is a temporary one; the lung borders retracting to their original state in a few minutes, as a rule, after ordinary breathing is resumed. The results achieved in auscultation are dependent in a measure on the way the patient breathes. He should be instructed how to breathe before auscultation is attempted, and cautioned to make no noise with the mouth. In a large number of cases breathing through the mouth is preferable to that through the nose, owing to the frequency of nasal obstruction which prevents the entrance of a sufficient volume of air necessary for proper inflation of the lungs. There are many cases of pleuritis sicca, unattended by effusion or adhesions, which upon auscultation fail to yield the characteristic friction-sounds. This is owing in a measure to insufficiently filled lungs, which fail to bring the two layers of the pleura in apposition. I have sought to remedy this defect by the following procedure, which I consider of undoubted diagnostic importance. The patient is instructed to lie on the region where pleural friction-sounds are indistinctly heard for a few minutes. This manœuvre brings the two pleural layers together, and when the patient breathes deeply the friction-sounds may be heard to become indistinct or disappear, however, after repeated inspirations. The manœuvre may be repeated a number of times. I have noted the occurrence of anæmia with its concomitant symptoms in pulmonary atelectasis, and I have reported (*vide The Medical News*, March 18, 1893), twenty-five of these cases based on an analysis of the blood and noted the improvement of these cases after inflation of the lungs.

Respectfully,

ALBERT ABRAMS, M.D.

SAN FRANCISCO, CAL.

CARE AND TREATMENT OF THE NIPPLES IN THE GRAVID AND PUERPERAL STATES.

TO THE EDITOR OF THE MEDICAL RECORD

SIR: While having read with much interest, in the issue of your journal of February 11th, a paper by Dr. S. Marx, which he presented to the Metropolitan Medical Society on January 25th, with the above title, I cannot refrain from taking exception in a friendly spirit to some of the statements therein contained, as I consider them in a measure misleading and likely to give rise to erroneous impressions in the mind of the aspirant to obstetrical honors.

In the first place the writer, I think, to judge from his words, gives undue importance to the influence and protective qualities of the "branny scales" of dried colostrum which lightly adhere to the epidermis covering the nipple. He says: "Thus we have produced by nature a perfect protection to the nipple from external injury."

Further, one may take exception to the statement that nature has anything to do with the placing of the fluid upon the surface of the nipple as a protecting medium; for it is the application of external pressure which causes it to exude from the lactiferous ducts, and it is mere chance if it is not wiped away by the patient's undergarments.

Besides, we know that the scales are far from being a perfect protection—in fact, can scarcely be considered a protection at all, since the slightest friction causes their detachment. Now the author, moreover, states: "When from friction, rubbing, or harsh manipulation this protection is removed in places, you get the familiar erosion of the nipple. If entirely rubbed off you have an uneven, bright red, puckered surface, presenting the picture of a sensitive, painful, fissured, or excoriated nipple."

Surely, the writer does not mean to say that when those branny scales fall off, the nipple is denuded of its epidermis and has the appearance he describes. One does not find a pregnant female's nipples presenting this appearance even when the colostrum fails to exude and dry upon them. Fissured and excoriated nipples few, I think, are prepared to admit are due to the removal of the scales of dried colostrum. Far from it! When the irritation and friction have been so great as to destroy or detach the epidermal layer, then, and not before, have we such a condition as above described. On these points I would take issue with the writer, but when he condemns the practice, as advocated by the "American Obstetrical Encyclopædia," of hardening the nipples by the local employment of astringents in alcoholic solution, then I heartily endorse what he holds to be an abomination, and believe his opinion is grounded on sound scientific principles.

I am further in accord with him as to the treatment of inverted nipples, and deem the practice of gradual and gentle eversion a wise procedure. I think if water were entirely discarded as a fluid suitable for bathing tender nipples, the obstetrician would have far less trouble in keeping these delicate structures in a healthy condition. Water acts as an irritant when applied to the external covering of the nipple in its engorged state, and I have therefore abandoned its use, and substituted olive oil as a cleansing agent. The object desired is not to harden the nipple, as if it were a leaden bullet, but to keep it soft and pliable, and render its protecting coat of epidermal cells sufficiently thick and resistant to stand the wear and tear of nursing.

The writer takes a bold and very proper stand against

over-treatment of this part, when he says: "Let the nipple alone, and only give it necessary protection." The ichthyol-lanolin salve he recommends when excoriations and fissures exist I have had no occasion to employ, since I have found a single application of a ten per cent. solution of cocoaine, followed by the use of sterilized heated mutton suet, all that was required.

The suet when applied in a fluid state soon cools and forms a perfect coating, thus affording the desired protection to the inflamed surface. This agent permits and assists in promoting the healing process, and at the same time renders the nipple soft, and capable of performing its full functions. Being harmless, its removal is not necessary, and it may be permitted to remain indefinitely.

The renewal is accomplished without pain or annoyance to the patient, while the sense of grateful relief is very apparent. Bichloride of mercury in solution I have long since abandoned, as too irritating.

As regards the use of carbolic acid, it has been my experience that, when combined with fats in suitable amounts, its irritating properties are so greatly diminished as to be practically nil. When in water, however, being non-miscible, it will act in an actively caustic manner, the degree of intensity depending upon the minuteness of the carbolic acid globules suspended in the fluid.

In a word, the rational treatment of sore nipples is governed by the same common sense laws as is that of any other part which is the seat of inflammation due to over-activity and irritation. What is required is REST and PROTECTION.

T. RIDGWAY BARKER, M.D.,
Demonstrator of Obstetrics in the Medico-Chirurgical College, Philadelphia, Pa.

ARTIFICIAL RESPIRATION IN ASPHYXIA NEONATORUM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Recently I read an article in the MEDICAL RECORD of March 11, 1893, by Dr. J. Harvie Dew, and was impressed with its being simple, practical, and combining the essentials in treatment of still-born children. This morning I attended a young woman in confinement with her first child, some two weeks before the expected time, and a small, feeble, still-born female child was delivered after a slow labor, but with a good condition of the mother throughout. The child remaining without evidence of life, before separating the cord I put into practice the method above mentioned, as it was fresh in my mind. Without going into details I may say that the results were the most speedy I have ever got in similar cases, and a happy mother is nursing her living child while I am writing this approval of the method. I consider it especially valuable to the younger members of the profession, because readily and easily available and safe for the child. I have practised medicine since 1869, and have had my share of obstetric cases in a country practice, where the man equal to the emergency is the man for the people; and when this method fails I doubt the success of any other in rural practice, without the resources available in a city.

Very respectfully,
T. C. WILSON, M.D.

DEWITTVILLE, N. Y., March 22, 1893.

A Long Nap.—Johann Latus, a miner of Breslau, is reported to have lain asleep for four and one-half months.

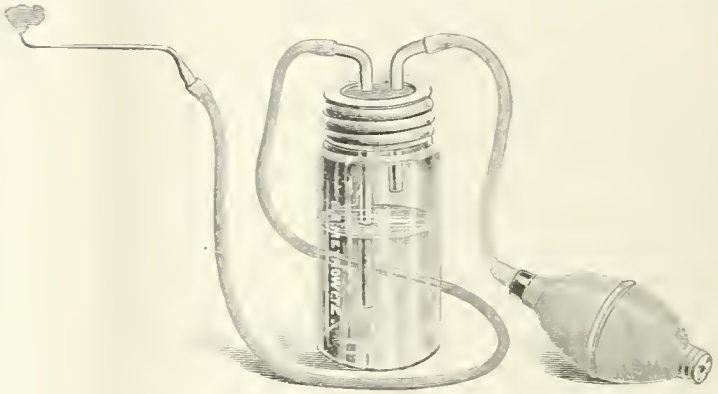
Leprosy has been found to exist in the Transvaal to a considerable extent, more than fifty Kaffir villages being infected.

New Instruments.

A MIDDLE-EAR DOUCHE AND AN INCUS-HOOK.

BY JAMES HEWITT, M.D.,
NEW YORK.

IN the treatment of purulent otitis media the complete removal of the secretion is of the greatest importance, but where there is only a small perforation in the membrana tympani, and in perforations of Schrapnell's membrane



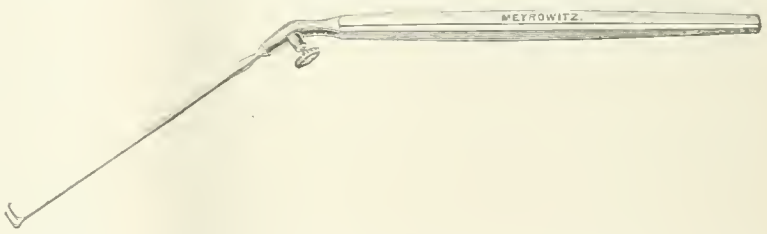
with suppuration of the attic, it is impossible to thoroughly wash out the tympanic cavity in the usual way; in these cases we must use the middle-ear syringe. Most of these syringes are, I think, too small, and are troublesome to use.

The douche shown in the cut I have found to work very well, and it has the advantage of being simple and not liable to get out of order, and can be got ready for use in a moment.

The tip or nozzle of the douche is of glass, and can be made of different sizes and shapes to suit individual cases. Although the glass tips are very fine and fragile, they can be used with perfect safety and without fear of breaking, and are to be preferred to metal ones on account of cleanliness.

It is advisable to have the rubber tubing sufficiently long to enable the operator to compress the butt with his foot, and so leave both hands free; or if preferred it may be compressed by the same hand that holds the speculum. The douche throws a constant stream and not a spray, as might be inferred from the illustration.

The second cut shows an incus-hook which has proved very useful to me in operations for removal of the incus-



especially in those cases where from necrosis the incus has become much reduced in size. The manner of using the hook is as follows: The malleus and membrana tympani having been removed, it should be introduced well up into the attic, and in doing this care should be taken to keep close against the posterior wall of the tympanum, so as not to dislodge the incus: the hook is next drawn outward until it comes in contact with the anterior wall, and then downward so as to bring the incus into view, when it can be removed with forceps. In using this instrument there is no danger of forcing the incus into the mastoid cells.

Both of these appliances were made for me by E. B. Meyrowitz, New York.

27 WEST THIRTY-SIXTH STREET.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 8, 1893.

	Cases.	Deaths.
Typhus fever	13	4
Typhoid fever	17	5
Scarlet fever	211	20
Cerebro-spinal meningitis	14	20
Measles	115	8
Diphtheria	110	28
Small-pox	11	4
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

What Becomes of Medical Graduates?—A correspondent of the *Medical Age* writes as follows: "I have endeavored to keep track of one hundred of my medical friends after graduation, especially of what they did during the first five years, and find nearly seventy-five per cent. had to resort to other employment to make a living. Twenty-three received a salary, either in addition to practice or separate therefrom. Fifteen were proprietors of drug stores. Three were insurance agents. Four loaned money. One sold real estate. Three were connected with medical journals. One was an agent for drugs. One for books. One preached. One was in the patent medicine business. Two were farmers. One a manufacturer. Two gave massage treatment. One sawed wood, and subsequently suicided. Twelve gave up in disgust, and one never tried to practise at all. Twenty-nine graduates only in one hundred exclusively devoted themselves to medicine, and of these eleven associated themselves with other practitioners, and in many cases fell heir to their practice."

An Accomplished Physician.—The following comes from Oklahoma:

"Located at Perkins and will visit Patient at ther home if so Desired.

"Dr. C. Welter and for Beast.

"Special attention will be taken in female complains old or young also in Midwifey at an call and will treat cases of Rhumatism and Eplective fits and the Doctor will keep on hand a salv that he makes himseff good for man women aliments warnted as good a salv that is in the united State for all soorse or swelling saddle soores or collar Bruises and will grow out a New hoof and the Doctor will make a syrup for coughs and could and Plurise in the side or lungs charges Reasonable Consultation Free."

Regulations Concerning Patent Medicines in Europe.—It appears from an American consular report, that the regulations of several European countries concerning patent medicines are a good deal more stringent than those of Great Britain. In Austria Hungary prepared medicines, whether patented or not, unless imported for druggists, require a special permit from the customs authorities. All medicines and medical compounds are excluded from protection by the Austrian Patent Law, and the sale of such is permitted only to, and in, drug stores. In Belgium, patent medicines can only be sold by apothecaries or other authorized persons, and must bear the seal of the seller, who assumes the responsibility of the product. In Denmark the sale is confined to apothecaries. France entirely prohibits the sale of secret medicines, unless they are approved by authority and the formula is inserted in the official formulary. In Germany all proprietary medicines must be retailed by a regularly sworn and licensed apothecary, who is responsible for their effect on the patient; but the most serious restriction is the prohibition of advertisements of patent medicines in public journals when such medicines are made by a secret formula or process. This law is rigorously enforced in Baden and Prussia, but less stringently so in Wurtemberg, Bavaria, and some parts of Northern Germany, while in Saxony the authorities exercise the right of prohibiting the sale altogether. In Italy the composition of a patent medicine must be approved by the Board of Health. No patent medicine is allowed entry into Russia unless special permission is on each occasion obtained from the Medical Department of the Minister of the Interior. If, after careful examination, it is proved that the production of such medicines requires elaborate work and expensive apparatus, it is allowed entry subject to a duty, provided such medicines are regarded as beneficial and are compositions durably preserved. In Sweden, Switzerland, and Turkey there are but few restrictions.

Dog Flesh as an Article of Diet in Germany.—A statement recently published by the municipal authorities of Munich gives some startling information as to the increased consumption in that city of dog flesh, an article of diet which has hitherto found most favor in the eyes of inhabitants of the Celestial Empire. So great an appetite seems to have developed for that food, that the authorities have thought it time to interfere for the protection of dog owners, whose pets are stolen to grace the table of the intrepid gourmets who lust after these canine flesh-pots. This new form of poaching has, it appears, grown into a regular industry in Munich, the demand creating the supply in accordance with economic laws. Dog flesh is largely consumed as such by Italian workmen, many thousands of whom are employed in Munich, but there is also too much reason to believe that the same substance is as freely used in the concoction of sausages in that city as the flesh of the harmless necessary cat is supposed to be nearer home.—*British Medical Journal.*

For Laryngismus Stridulus, or Croup.—

℞. Chloroform ..... gtt. v.–x.
Water ..... ʒ vij.
Glycerine ..... ʒ j.
M. Sig.: A teaspoonful of this every thirty minutes until the patient is relieved.

—*Therapeutic Gazette.*

School Hygiene in Berlin.—The Section of Hygiene of the Berlin Teachers' Association has passed a resolution that it is desirable that a committee of medical men, public officials, architects, engineers, school managers, and teachers should be formed to investigate the sanitary condition of Berlin schools, with a view to the carrying out of whatever improvements may seem necessary. The resolution further declares it to be desirable that provision should be made for the inspection of schools by medical men.

The Citrus Fruits in Cholera Times.—The Imperial Board of Health of Germany has issued a circular stating that the comma spirillum is destroyed in a few hours when brought in contact with the cut surface of an orange or lemon, and in less than twenty-four hours on the rind of the fruit. It is therefore deemed unnecessary to place any restriction on the importation and sale of the citrus fruits, even if they should come from cholera-infected regions.

The Medical Missionary Society of China.—The report of this Society for the year 1892 presents gratifying evidence of progress in many directions. The number of hospital in-patients has increased in proportion to the enlarged ward accommodation, and the addition of private waiting-rooms has had the effect of attracting patients from among the more wealthy and educated classes of natives. Much good work has been accomplished by the native hospital physicians, among whom is Mrs. Ng, a graduate of the medical class, whose efficiency is far superior to her name. A specially valuable feature of the

Society's work is the education and training of Chinese students in the modern theory and practice of medicine and surgery. This will, it is hoped, result in the gradual introduction of scientific medicine into the country. By means of the instruction given in the hospital school, qualified native physicians and surgeons are prepared for work in the interior cities and towns, and capable surgeons are furnished to the Chinese army and navy.

A Floating Cholera Hospital is to be placed in the Thames, within the city limits of London, for the reception of cholera patients this summer, in case the disease appears there.

Aseptic Slaughter-houses.—An investigation was recently undertaken, at the instance of the Board of Health of Paris, to determine how far it was possible to observe antiseptic precautions in the abattoirs of that city. M. Nocard, who was instructed to make the investigation, has reported that the sterilization of instruments used in slaughtering was impracticable, owing to the large number of knives, saws, boards, carts, pails, scales, wrappers, etc., used, and furthermore it would appear to be unnecessary. He found that the greatest care was taken to preserve cleanliness in all the steps of butchering and preparing the meat for market.

To Disguise the Taste of Chloral.—Dr. E. Holland says that chloral may be taken very pleasantly in the ordinary bottled lemonade. The requisite dose of chloral, dissolved in sirup, is placed in a glass with a little water, and the tumbler is then filled up with bottled lemonade. The taste of the drug is thereby almost entirely disguised, while its hypnotic effect is in no way impaired.

The One-Armed Skat-player may now enjoy his game in spite of his misfortune, thanks to the invention of a playing-card rack by a philanthropic instrument-maker of Dresden. The rack will hold conveniently from ten to twenty "squeezer" playing-cards, and by means of a ball-and-socket joint may be turned at any angle so as to prevent the other players from seeing the faces of the cards.

The Treatment was Successful but the Consequences were Deplorable.—The *Journal d' Hygiène* produces the following harrowing account from the *Gazette Salutaire* of August 12, 1773: The wife of a baker in Aubusson being attacked with a dangerous disease, the physicians ordered a sweat. The husband thought that the most efficacious means of bringing this about would be to surround the patient with loaves fresh from the oven. The model diaphoretic acted like a charm, and the woman was well in twenty-four hours The thrifty baker was delighted, but saw no reason for wasting so much good bread, and accordingly disposed of it to his customers. But all who ate of the bread were attacked by the same disease, which spread then so rapidly that more than two hundred persons died within a fortnight. "The gates of the city are now closed against everybody, the consternation is general, and the unfortunate inhabitants are imploring the aid of heaven to deliver them from this horrible scourge."

Bromide of Strontium is reported to be very useful for the relief of all forms of vomiting. It is given by Dr. Coronedi in doses of five to fifteen grains, three times daily, either before or after meals.

Medical Societies in Moscow.—There are fifteen medical socities in Moscow. The oldest of which is the Physico-medical Society, founded in 1804. This was for a long time the only Society of importance in the city, and its meetings used to be largely attended. Within the past five years, however, the tendency toward specialization has become very pronounced, and societies of neurology, pediatrics, gynecology, dermatology, balneology, ophthalmology, surgery, military surgery, internal medicine, etc., have been established. Recently efforts have been made to organize a new general medical society in the hope of causing a reaction against excessive specialization. The leading spirits of the new organization are members of the University Faculty and they have given to their new creation the somewhat awkward title of "Society of the Physicians of the Clinics and Scientific Institutions of the Faculty of Medicine of Moscow." The first meeting was held in January of this year, and was eminently satisfactory to all who took part. Two meetings are held each month, one of which is in a hall where set communications are read, and the other at one of the hospitals or clinics, where cases are presented and discussed.

Pneumonia without Cough.—Dr. Aldous reports, in the *British Medical Journal* of March 4, 1893, the case of a man, twenty-two years of age, who passed through a severe attack of pneumonia, with high temperature and delirium, without any cough at all. The case was typical in every other respect.

Flies and the Spread of Cholera.—Dr. Sawtschenko, writing in the *Centralblatt für Bakteriologie*, gives the results of experiments made by him with the view of ascertaining the part played by flies in the transmission of cholera. In these inquiries he employed ordinary house flies, and also a larger variety, which live in the open, and are to be found alike on excrement and on exposed food-stuffs (flesh and fruit). The results obtained were as follows: 1. In the bowel contents and excrement of flies fed with pure culture of cholera the specific bacilli could be demonstrated as late as the fourth day after ingestion of the organisms. 2. The same results were obtained when, instead of pure culture of the bacillus, the excrement of cholera patients, or matter from the bowel of a cholera corpse, was supplied as food. 3. Cholera bacilli taken from the bowels of these flies on the third day after ingestion still maintained their virulence, killing guinea-pigs about as quickly as the original culture. 4. In certain cases the flies were fed plentifully upon sterilized broth after the bacilli had been supplied to them, and preparations made from these flies showed the organisms in immense quantities, so that it is highly probable they had multiplied in the body of the fly; if so, the fly must be regarded not only as a conveyer of cholera, but also as a focus or source of fresh infection. These investigations are being continued.—*British Medical Journal.*

BOOKS RECEIVED.

A Clinical Record for Accurately Recording the History and Subsequent Progress of Interesting or Peculiar Cases. Folio. By Thomas M. Stewart, M.D., Cincinnati, O.

Report of General William W. Averell, U. S. Army, on Inspection of National Military Homes and Soldiers' Homes in States. 8vo, 317 pages.

Manual of Operative Veterinary Surgery. By A. Liautard, M.D. 8vo, 786 pages. Illustrated. Sabiston & Murray, New York.

Handbook of the Treatment of Diseases of the Throat, Nose, and Naso-Pharynx. By Carl Seiler, M.D. Fourth edition. 8vo, 412 pages. Illustrated. Lea Brothers & Co., Philadelphia, Pa.

The Cardinal Symptoms of Urinary Disease. By E. H. Fenwick. 8vo, 354 pages. Illustrated. J. & A. Churchill, London.

The Year-Book of Treatment for 1893. 12mo, 496 pages. Illustrated. Lea Brothers & Co., Philadelphia, Pa.

Medical Pocket Atlas—Obstetrics, Part I. By O. Schaeffer, M.D. Translated by J. C. Edgar, M.D. 12mo. L. Hydel, New York.

Diseases of the Skin. By C. C. Ransom, M.D. 12mo, 201 pages. Illustrated. Lea Brothers & Co., Philadelphia, Pa.

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Original Articles.

HYDROTHERAPY, EXTERNAL AND INTERNAL.[1]

BY W. H. DRAPER, M.D.,

NEW YORK

I HAVE chosen the subject of hydrotherapy for discussion this evening because it has long seemed to me that its importance and value in practical therapeutics were not duly recognized. Its principles are not very generally understood, and its practice is often perfunctory and ill regulated. This is true both of the external and internal use of water as a remedial agent, and of the administration of bathing establishments, as well as of drinking cures, especially in this country. The former are too often under the control of professional adventurers, and the latter are frequently exploited as panaceas by irresponsible proprietors associated with zealous but incompetent doctors. This state of things can only be remedied by a wider and more intelligent appreciation of the value of hydrotherapy, and a more exact knowledge of its principles and uses, as well on the part of the public as of the profession.

It is important for me to premise that I do not propose in this paper to restrict the use of the term hydrotherapy to what was formerly known as hydropathy, or the external application of water, but to include under this form of therapeutics the internal as well as the external use of water, whether pure or mineralized. It is better, I think, to treat the subject in this way, in order to present a comprehensive view of the physiological principles which are involved in the scientific use of water as a remedial agent. This is the more necessary because at most spas and water cures external and internal hydrotherapy are combined.

It is needless to observe in this presence that the history of hydrotherapy presents an inextricable tangle of fact and fiction, of valuable experience obscured by groundless assumptions, and often distorted by the glamour of superstition. In no branch of therapeutics has science been made more subservient to the base uses of charlatanism. An air of mystery still pervades the popular mind in regard to mineral springs, and to a large extent medical men encourage the traditional faith in the specific virtues communicated to water by the alchemy of nature. The purest waters, as well as those of the most diverse constitution, are vaunted as panaceas and accredited with marvellous cures in the most dissimilar morbid conditions. In this unfortunate, but incontestable, phase of hydrotherapy, even at the present day, it is important for the profession to divest this subject as far as possible of the errors and ignorance which now environ it, and to diffuse a knowledge, so far as we possess it, of the principles which underlie and explain the remedial effects of water in its external and internal application.

It is convenient to divide the waters which are used for therapeutical purposes into the mineralized and the non-mineralized—the latter are often called indifferent waters, to indicate the fact that they are not medicated. It is proper to state, however, that almost all waters derived from terrene sources contain more or less mineral matter, and some of those which are most renowned at the present day, as valuable in the treatment of disease, are even less mineralized than ordinary drinking-waters. Many of the most popular spring waters are so feebly mineralized, or so slightly impregnated with gases, as to be practically indifferent waters, having no other effects than those which are due to pure water. This is especially true of the Lithia waters, so much in vogue at the present time in the treatment of lithiasis. The indifferent waters may be said to owe their therapeutical effects to their physical properties and their mode of application, and where they do contain traces of mineral matter or gaseous ingredients they do not, as we shall see, affect in any material degree their efficacy either as external or internal remedies.

The mineralized waters present a large variety, both as to the number and proportional quantities of their mineral ingredients, some of them containing as many as twenty-five distinct salts in a state of solution, the bases and the acids, with the exception of carbonic and sulphohydric acids, being rarely found free. The bases of importance are soda, potassa, magnesia, lime, lithia, and the oxides of iron and manganese; these are chemically combined with carbonic, silicic, phosphoric, sulphuric, hydrochloric, bromohydric, iodohydric, and sulphohydric acids. The combinations of carbonic, hydrochloric, sulphuric, and phosphoric acids with the above bases constitute the essential chemical constituents of most of the renowned mineral waters. It is doubtful whether the salts of iodine and bromine, found in insignificant proportions in some of them, have any therapeutic value.

The predominance of the acid element in the soluble salts of mineral springs naturally divides their waters into five principal classes: the bicarbonated, the chloride, the sulphated, the phosphated, and the sulphuretted.

It is important to observe that all these classes present certain differences as to temperature and the amount of gases which they hold in solution or in a free state, which makes it essential to subdivide them in order to appreciate more clearly their remedial value.

Considering their variations in temperature, we may classify them as warm, hot, cool, and cold springs. Taking the temperature of the ambient air at 60° F., we may describe springs having a temperature of from 100° to 110° F. as warm springs; those exceeding the latter temperature as hot springs; those having a temperature between 75° and 98°, as cool; and those below 75°, as cold springs. It has been claimed that the caloric in natural warm and hot springs has a specific virtue which artificially heated waters do not possess; whether this is a fact or not, it would seem impossible to prove, but the statement doubtless affects the imagination of the public.

In regard to the presence of gases in solution or in a free state in mineral waters, it is important, from a therapeutic point of view, to indicate their variations in this respect, inasmuch as specific virtues are attributed to the action of these gases at drinking as well as bathing cures.

Carbonic acid gas is, of course, the most common gaseous element in mineral waters, and next to this, sulphuretted hydrogen, free nitrogen, and carburetted hydrogen are also sometimes found, but in small proportions, and they probably have no therapeutical importance.

The amount of carbonic acid gas in natural waters varies from ten to fifty cubic inches in sixteen ounces of water; sulphuretted hydrogen exists in a free state, even in the most famous sulphur waters, in very small quantity. In some sulphur waters, indeed, there is no free gas or only traces of it, while the most trustworthy analyses have never revealed more than 2.4 cubic inches in sixteen ounces of water.

The presence of an electric element in water has been affirmed by some physicists. The thermal waters of Gas-

[1] A paper read at the April meeting of the Academy of Medicine, 1892.

tein and Ragatz, for example, have been said to owe their remarkable effects to the fact that they deflect sensibly the magnetic needle, while ordinary waters have not this property. Another assertion, perhaps less reliable, is made by the enthusiastic advocates of the extraordinary virtues of the Gastein waters, and that is, that the decomposition of the water by the galvanic current shows each atom of water to be resolved into three atoms of hydrogen and one of oxygen. Not much reliance is placed by hydrologists upon this assertion.

With this preliminary statement of the classification of waters used in hydrotherapy according to their physical and chemical qualities, we are prepared to consider more intelligently their physiological effects and their uses in the treatment of disease. First, let me ask your attention to the physiological effects and remedial uses which are dependent upon their variations in temperature and their gaseous constituents. It is proper to state here that it is probably a matter of indifference, so far as the effects due to temperature are concerned, whether the waters are mineralized or not.

The physiological effects of the cold bath vary with the degree of the temperature below body heat, but these effects cannot be said to be marked unless the temperature of the water is at least 10° or 15° F. below that of the blood; they increase rapidly below these temperatures. The immediate effects are a contraction of the cutaneous vessels, and an exaltation of the spinal reflex as manifested by shivering. If the immersion is long continued, there is a more or less marked lowering of blood temperature, a rapidly increasing frequency and feebleness of the heart action, an accumulation of blood in the systemic veins, and, if further protracted, the usual signs of asphyxia and collapse ensue. The reaction from the cold bath, which is the effect sought in its therapeutic use, is a sudden dilatation of the cutaneous vessels, stimulation of the heart action, a rapid re-establishment of the equilibrium of the circulation, and a restoration of body heat.

Where the cold bath is used for the abstraction of heat, as in cases of hyperpyrexia, the effects of the reaction are most striking. They are manifested by the partial return of consciousness, by the subsidence of delirium, the diminished reflex excitability of the spinal cord, and the strengthening of the heart action.

It is true that these effects are coincident with the lowering of the blood temperature, but it seems probable that they are partly due to the powerful impression made by the cold bath upon the peripheral nervous distribution. It would certainly appear to be in this way that it produces its good effects in neurasthenic conditions. It has been found most useful in all those disturbances of innervation which depend upon or coexist with instability of the vaso-motor system. In persons whose nutrition has been enfeebled by chronic disease, such as catarrhal and rheumatic affections, by emotional shocks or by alcoholic and venereal excesses, and in the protean derangements caused by so-called neurasthenia or spinal irritation, in hysteria and hypochondriasis, the good effects of the cold bath are very striking. It seems to be more effective than any treatment by medicines in stimulating the nerve-centres, in restoring the equilibrium of the circulation, and in reviving the activity of the organic functions.

The application of the cold bath requires, both in acute and chronic disease, much discretion and trained intelligence. It is not easy to make use of it effectively in private practice, since its best results require the appointment of a well-ordered establishment, where all the various methods of applying cold by means of water can be wisely and skilfully directed. There is no end to the variety of ways employed at the famous bathing cures, in the general and local application of differently tempered waters; but it is probable that the methods of application are of less importance than the judicious regulation of the temperature, and the duration and frequency of repetition of the baths.

The application of heat by means of baths causes directly a dilatation of the cutaneous vessels, a stimulation of the heart action, and, it has been said by some physiologists, a temporary depression of the internal body heat. It brings about, therefore, the same conditions which result from the reaction which follows the application of cold. The temperature of the warm bath may vary from 2° to 10° F. above blood heat. At most of the noted spas, whether the waters are indifferent or mineralized, the warm bath is more commonly used than the cold; the use of the latter, being more strictly confined to the so-called hydropathic establishments.

Warm baths are mainly indicated in the weakly conditions following convalescence from acute disease, in muscular rheumatism, in chronic articular rheumatic affections in uterine and ovarian diseases, in the nervous exhaustion following alcoholism, tobacco and opium poisoning, sexual excesses, or overwork. In truth, we may say, there is no end to the ailments to which relief is not promised, and often afforded, at renowned warm springs, like those of Aix and Ragatz. They are often the last resort of real and imaginary invalids, who have wisely thrown physic to the dogs, and the paradise to which doctors too gladly consign all those who have failed to illustrate the powers of scientific medication.

It would be idle to question the remedial efficacy of the indifferent warm springs of Gastein and Ragatz, of Teplitz and Wildbad, of Plombières, of Buxton and Bath, and of many others in Europe and this country; and yet it is quite impossible to estimate the exact therapeutical value of the bathing element in the cures that are wrought at these resorts. The enforced repose which they secure, the strict hygienic discipline, the diversions, the influence of the suggestion of healing which pervades the air, all these contribute to the repair and renovation to which nature is inclined. This much, however, may be taken for granted, that whatever virtue resides in the water is due to the physiological effects of its temperature upon the circulation and the nervous system. How far these effects might be accomplished by the use of warm baths in the homes of invalids we cannot as yet be said to have the experience to determine, but their use in private practice is perhaps more limited than it should be. It is probable that the accessory conditions and influences we have mentioned would prove essential to secure the best results from this method of treatment in a large majority of the cases to which it is applicable.

The impregnation of indifferent and mineralized waters with gases, especially with CO_2 and sulphohydric gas, has long been supposed to add to their therapeutic efficacy. Under ordinary pressures it is not believed that CO_2 enters the circulation through the skin, and the same is probably true of sulphuretted hydrogen. Such beneficial effects, therefore, as these gases produce must be due to their action on the cutaneous surface. Carbonic acid gas is stimulating in its action upon the peripheral nerve-endings, and intensifies the benefits of the reaction following the bath upon the nerve-centres. So much importance has been attached to this effect at some of the continental spas, that baths of carbonic acid gas are administered—with proper precautions to prevent its inhalation—for certain neurasthenic conditions, and especially in cases of sexual impotence and in the neuroses associated with uterine diseases.

The part which this gas plays in the saline drinking waters is that of a local stimulant, and it is supposed to be useful in increasing gastro-intestinal peristalsis. It is especially indicated, therefore, in chronic constipation; and on account of its innocuous quality when taken into the stomach, it may often be used advantageously for this purpose in the milder saline drinking waters, like Selters or Vichy, where the long-continued use of the more drastic bitter waters would be harmful. As before remarked, the sulphur waters are so feebly impregnated with sulphuretted hydrogen that it seems probable that their therapeutic value is due to their thermal quality, when used for bathing, or to the mineral ingredients of the waters when used internally.

Mineralized Waters.—For the systematic considera-

tion of mineralized waters, we may conveniently divide them into six classes:

1st. *Earthy Waters*, or waters containing sulphates and carbonates of the alkaline earths, lime and magnesia, often with traces of soda, potash, and iron.

2d. *Chloride of Sodium and Potassium Waters*, often with traces of lithium and magnesium, lime and iron.

3d. *Alkaline Waters or Bicarbonate of Soda and Potash Waters*, with traces of magnesia, lime, and iron.

4th. *Sulphate of Soda and Magnesia Waters*, with small quantities of sodium chloride and carbonates of soda, lime, and iron.

5th. *Sulphur Waters*. Many sulphur waters are indifferent waters slightly impregnated with sulphuretted hydrogen. Some of them contain chlorides of sodium and magnesia, and traces of sulphates.

6th. *Iron Waters*. The iron is always in the form of bicarbonate, and is commonly combined with the bicarbonate of magnesia, lime, and soda.

This is an arbitrary division of mineral waters, since they may all be said to be mixed waters, but the predominance in each class of particular combinations of acids and bases makes the classification a convenient one for practical purposes, and enables us to explain their several physiological and therapeutical effects. As already stated, it is not proper to attach too much importance to the assertions which are made in favor of the applicability of each one of these varieties of mineral waters to special morbid conditions. The same maladies appear, for example, to be relieved at the common salt springs, and the Epsom and Glauber salt sprngs, and it is not necessary or expedient always to send anæmic subjects to iron springs, since the process of sanguification is often improved by saline waters.

There are many circumstances which enter into the choice of drinking cures for different patients with the same morbid derangements, and the question cannot be decided by the analysis of the water. In considering the physiological and therapeutical effect of mineral waters we have first to notice the physiological and therapeutic effects of water *per se*. I would not refer to such a simple physiological matter as the uses of water in the human economy, if it did not seem to me to be one of those points which physiology suggests to the practising physician, the value of which we are very apt to overlook. Its uses, like those of fresh air, rest, and exercise, in the treatment of disease, are too often neglected or made secondary to drugs. Water-drinking is not a popular prescription, and the famous English physician, Gregory, seems to have realized the fact when he said that he had made twenty patients by wine, where he had made one by water. It is not necessary to do more than refer to the part which water plays in the preparation of the food for absorption from the alimentary canal, to its necessity in the metabolic processes by which all the potential energy of the food is made active, to the maintenance of equable blood-pressure in the vessels, and finally to the proper and efficient function of excretion. Now all these effects are, of course, impossible without water, but they are never brought so prominently to the attention as they are at mineral springs, where it is systematically administered as a remedial agent under professional direction.

That water, however, containing mineral ingredients has its useful physical properties heightened, and develops an efficacy which, in its unadulterated state, it does not possess, is manifestly true; and this fact leads us to the consideration of the physiological and therapeutic effects of the salts in mineral springs.

Let me first call your attention to the *earthy waters*. These are mainly lime and magnesia waters, and they are generally thermal, ranging in temperature from 102° to 120° F. They are chiefly used as baths, and are probably in no respect better for this purpose than indifferent warm waters. They formerly had considerable renown in the treatment of skin diseases and in chronic rheumatism. On account of the lime salts they contain they have been recommended in mollities, but the supply of lime in the food is so large that they cannot be regarded as having any considerable value on this account. For drinking, these waters are not supposed to have any therapeutic value beyond that of ordinary water. The most famous of these springs are those of Leuk in Switzerland, Lucca in Italy, Plombières in France, and Bath in England. The hot springs of Virginia and Arkansas are good types of these waters in this country.

The chloride of sodium waters owe their physiological effects, of course, to their chief constituent, common salt. Of all the mineral constituents of the body this is the most important, and next to lime phosphates, it is the most abundant. Its most important functions are probably its actions in aiding primary digestion as a food solvent, in providing a source of hydrochloric acid, in regulating endosmosis and exosmosis through organic membranes, and in stimulating the process of food metabolism. It is in fact an indispensable article of diet.

In the common salt waters, the proportion of the other chlorides is small, and they are probably insignificant in their therapeutical effect as compared with the sodium chloride. These waters are largely used for drinking and bathing. For bathing they are more stimulating to the cutaneous circulation than indifferent thermal waters, and this stimulating quality is sometimes increased by the addition of salt and by the large amount of carbonic acid gas which many of them contain. They may be said to have the physiological effect of sea-baths. The percentage of salt in the so called sool baths varies from two to ten per cent. There is no evidence that the curative effect of these sool baths is due in any degree to the absorption through the skin of the saline constituents of the water, and it is reasonably certain that their value is dependent solely upon their stimulating effect upon the cutaneous circulation. The very minute quantity of iodine and bromine found in some of the common salt springs, like those of Kreuznach for example, has been supposed to make them especially valuable in scrofulous affections, but the exceedingly small quantity of these elements, not more than one-tenth or one-fifteenth of a grain in sixteen ounces of the waters, seems too insignificant to make it possible for them to exert any specific action.

The therapeutic action of the common salt waters, if we may believe the statements of the physicians at these springs, covers a very wide range of maladies. They may be conveniently classified as organic and functional derangements of the digestive organs, mainly catarrhal, and extending from the pharynx to the rectum; nervous disorders, organic and functional, including paralysis, and all forms of cerebral and spinal neuroses; disorders of the genito-urinary apparatus, catarrhal affections of the respiratory tract, and in fact, we might say, all departures from the norm of health dependent upon disordered nutrition. Now it is impossible, of course, to correlate all these varied conditions of ill health with any pathological state for which common salt is the specific remedy. If there be one common pathological factor in their causation, it is perhaps anæmia, a state which we know is brought about by a great variety of causes, and which tends to the production of an infinite variety of effects. There is certainly nothing more conspicuous in the rapid improvement of the general health which takes place at the renowned salt springs, than the improved blood condition, and it is probable that this alone determines largely the disappearance of most of the local functional derangements for which these waters are prescribed.

The most famous spas of this description are those in the valley of the Taunus, in Southern Germany, including those of Soden, Wiesbaden, Homburg and Nauheim, Baden-Baden, Kreuznach, Kissingen, and others too numerous to mention. In this country, the Saratoga waters are the best known example of this type, though there are many others.

The alkaline or soda waters form a distinct group of waters, for though they contain a large mixture of mineral ingredients, the bicarbonate of soda is the predomi-

nating one. It should be stated that the form under which all the constituent bases in any mineral water exist, is really a matter of inference, these bases being estimated from the ash after evaporation; it is probable, however, from the amount of carbonic acid present in this class of waters, that the soda is in the form of bicarbonate. It should also be remarked that, although these waters redden litmus, they do so from the free CO_2 they contain, and when this escapes are strongly alkaline.

The specific physiological effect of the bicarbonate of soda waters is the maintenance of the alkalescence of the blood; that property of the blood by which the albumin and fibrin are held in solution, the processes of oxidation stimulated, and the removal of the excrementitious products of retrograde metamorphosis facilitated. These physiological effects furnish the key to the therapeutic virtues of the alkaline waters. They have been celebrated for a long period in all the ailments which are supposed to proceed from the so-called gouty or arthritic diathesis, a diathesis which is presumed to have its origin in a diminished activity of the process of oxidation upon which healthy nutrition depends. Hence we find alkaline soda springs the resort of sufferers from all forms of gouty disease, from lithæmia, glycosuria, and all varieties of mucous and tegumentary catarrhs, which may be correlated as diseases of suboxidation. The relative power of the alkalies, in holding the albumin and fibrin in solution, in promoting oxidation, and in removing excrementitious products, is not determined: but experience generally favors the salts of soda as the least irritating to the stomach, and on this account best adapted for continuous use. Potash seems to have greater power as an eliminant, and is probably not inferior to soda in stimulating oxidation. Ammonia, on account of its volatility, has the least permanent oxidizing influence, and lithia is claimed, without sufficient cause, perhaps, to be superior to them all as a solvent of uric acid.

With this brief statement in regard to the efficient therapeutic element in the alkaline soda waters and the pathological conditions to which they are applicable, we are prepared to understand the value of these waters in a large and specific class of chronic ailments. As we have stated, the most renowned of these spas are frequented by sufferers from gout in its protean forms, from diabetes, and from chronic catarrhal affections. Vichy, Mont Doré, Royât, and La Bourboule, in France, Ems and Neuenahr, in Germany, and the Vichy Springs of Saratoga and Manitou, Col., are among the principal resorts for patients requiring the use of soda waters. These waters are generally cold, though some of them are warm. The temperature of the Vichy Springs varies, for example, from 50° to 110° F. Those of Ems have a temperature of from 93° to 104° F. They all contain a more or less considerable quantity of CO_2, the colder, of course, more than the warm springs.

Sulphate of Soda and Magnesia Waters.—What has been said of the physiological and therapeutical effects of the simple alkaline waters is true *a fortiori* of the sulphate of soda and magnesia waters. They are mixed waters, but the soda salts predominate, and they are found useful in the same class of cases. The waters of Carlsbad constitute a type of this natural group of mineralized springs. They contain the largest relative proportion of solid matter of all the mineral waters. Like the alkaline waters, they are held in especial esteem in the treatment of all gouty affections, particularly in cases of lithæmia, glycosuria, hepatic engorgement, gall-stones, chronic catarrhs having a gouty origin, and obesity. Like the alkaline springs, they vary in temperature, and are largely used both for bathing and drinking. On account of the large amount of bitter salts which they contain, they are more or less purgative in their effect. Having a much higher specific gravity than other waters, it is probable that they are not absorbed so largely into the circulation as the weaker alkaline waters, and that their purgative action is due largely to the intestinal exosmosis they provoke.

Time will not permit me to consider the advantages and disadvantages of the bitter and alkaline waters in the treatment of the classes of cases for which they are generally prescribed. I am disposed to believe that persons who are inclined to corpulency, or who are subject to acute gouty affections, to so-called acute bilious attacks or hepatic congestions, to attacks of biliary colic, to aggravated catarrhal affections of the stomach and bowels, are more benefited by the cure of Carlsbad or Marienbad, than by that of Vichy or Kissingen. Persons, however, who are the victims of hereditary gout, especially women with the nervous forms of gouty disease, hysterical and hypochondriacal subjects, with subacute catarrhal troubles, derive more advantage from a course at the alkaline and sodium chloride spas. I express this opinion with some reserve, but I believe it will be generally accepted as in accordance with the experience of those who administer the waters of the most renowned of these cures.

I am also unable to enter at any length into a consideration of the therapeutic effects of the sulphur and iron waters. In regard to the sulphur waters, it may be said that ever since the Prophet Elisha directed Naaman, the King of Syria, to bathe seven times in the river Jordan, in order to be cured of the leprosy, sulphur waters have been famous for their marvellous virtues in the cure of diseases of the skin. Hebra, in his learned article upon the history of scabies, explains the cure of Naaman by an elaborate exposition of facts which show that his disease was the itch and not leprosy, and that he was cured by bathing in the Jordan, because the water of that river contains sulphur. However this may be, it appears from an examination of the constituent ingredients of sulphur springs that they are for the most part mild chloride of sodium waters, of varying temperature, and that they contain such a small amount of sulphuretted hydrogen that they may be regarded as practically indifferent waters, owing what virtues they possess, beyond their parasiticidal property, to their thermal quality. There is no evidence that their reputed value in rheumatic affections can be ascribed to the absorption of sulphur either by the skin or when used internally. Whatever value they may have in the cure of cutaneous diseases must be ascribed to their thermal quality, and the same may be said of their supposed resolvent property in chronic arthritic affections.

What has been stated in regard to the exaggerated estimate of sulphur waters is true to some extent of the iron springs. In the one case, the foul odor and the deposits of sulphur in the neighborhood of the springs, and in the other case, the color of the sediment and the acrid taste of the steel waters, seem to have appealed to the imagination and stimulated faith in their specific virtues. The iron in these waters is always in the form of the bicarbonate of the protoxide, and is usually combined with the constituents of chloride and alkaline waters. There can be no question, of course, as to their great utility in anæmic conditions, but, as before remarked, the improvement in the quality of the blood is one of the most striking effects of the chloride and alkaline waters, which contain little or no iron. One fact, however, seems to be demonstrated by the popularity of iron waters, and that is, that iron in combination with the alkalies constitutes, in artificial combinations, one of the most efficient methods of introducing iron into the circulation. Another circumstance also contributes to the digestibility and prompt effect of the renowned iron waters, and that is, that they are generally highly charged with CO_2.

It would not be proper to conclude these remarks upon water cures without emphasizing the fact that their reputation rests largely upon the systematic and skilful mode of their administration, and upon the admirable combination of hygienic influences which is associated with their use. No one can visit these well-ordered spas on the Continent of Europe without being impressed with the strict enforcement of hygienic laws and the attention to the most minute details of diet and open-air exercise. In-

deed, it might be truly said that the whole system of hydrotherapy, as practised at these establishments, is a system of scientific hygiene based upon physiological principles, and illustrating at once the evil consequences of violating the laws of nature and the safest and surest method of restoring health.

The conclusions to be deduced from the preceding consideration of the physiological and therapeutical uses of mineral and indifferent waters in the treatment of diseases are: 1. That in bathing cures the beneficial effects are due mainly to the thermal quality of the waters and the methods of their application, there being no sufficient evidence that absorption of their mineral ingredients through the skin plays any part in their therapeutic effects. 2. That the chloride springs are chiefly useful for bathing purposes and as drinking cures in anæmic conditions, in chronic rheumatism, in chronic catarrhal affections, and in disorders of nutrition having their origin in nervous shock, overwork, or prolonged convalescence from acute disease. 3. That the alkaline and sulphate of soda waters owe their efficacy mainly to the soda salts, and are chiefly useful in gouty diseases: The carbonate of soda springs in the subacute and nervous forms of inherited gout, and the bitter waters in cases of acquired gout of the acute variety in high livers, and generally in the hepatic derangements with which this variety is accompanied. 4. That the sulphur waters may be regarded as indifferent thermal waters, having no special advantage over the ordinary thermal waters. 5. That iron springs, which are generally combinations of protocarbonate of iron with chloride or soda waters, are useful in anæmia from simple causes.

The following are analyses of typical examples of earthy, chloride, alkaline, sulphated, sulphur, and iron waters.

I. Earthy Waters.

Analysis of the Water of Leukerbad.

Sixteen ounces contain:

Sulphate of lime	10.673 grains.
" " magnesia	2.365 grains.
" " soda	0.399 grain.
" " potash	0.299 grain.
Carbonate of protoxide of iron	0.079 grain.
Carbonic acid	0.12 cubic inch.

II. Chloride of Sodium Waters.

Rakoczy (Kissingen) Spring.

Sixteen ounces contain:

Chloride of sodium	44.71 grains.
" " potassium	2.20 grains.
" " lithium	0.15 grain.
" " magnesium	2.33 grains.
Sulphate of magnesia	4.50 grains.
" " lime	2.99 grains.
Carbonate of lime	8.14 grains.
" " protoxide of iron	0.24 grain.
Carbonic acid	41 cubic inches.

III. Alkaline Soda Waters.

Analysis of Grandegrille Spring, Vichy.

Sixteen ounces contain:

Bicarbonate of soda	37.5 grains.
" " potash	2.7 grains.
" " magnesia	2.3 grains.
" " lime	3.3 grains.
" " protoxide of iron	0.03 grain.
Chloride of sodium	4.0 grains.
Silica	0.5 grain.
Carbonic acid	14 cubic inches.

IV. Sulphate of Soda and Magnesia Waters.

Carlsbad Sprudel Spring.

Sixteen ounces contain:

Sulphate of soda	18.21 grains.
" " potash	1.26 grain.
Chloride of sodium	7.91 grains.
Carbonate of soda	10.45 grains.
" " lime	2.28 grains.
" " magnesia	0.95 grain.
" " protoxide of iron	0.02 grain.
Carbonic acid, 11.8 inches in 16 ounces.	
Temperature, 164.2° F.	

V. Sulphur Waters.

Many of them are indifferent waters and only slightly impregnated with sulphuretted hydrogen. Some of them contain chloride of sodium and magnesium, and traces of sulphates. The amount of free sulphuretted hydrogen in them varies from 0.05 to 2.4 cubic inches to 16 ounces.

VI. Analysis of Paracelsus Iron Spring, St. Moritz.

Sixteen ounces contain:

Bicarbonate of protoxide of iron	0.25 grain.
" " magnesia	1.25 grain.
" " lime	6.84 grains.
" " soda	1.59 grain.
Sulphate of soda	2.67 grains.
Carbonic acid	57 cubic inches.

REMARKS ON SYMPHYSEOTOMY.[1]

By HENRY C. COE, M.D.,

NEW YORK.

In introducing briefly a discussion of the subject which has suddenly aroused so much interest among obstetricians, it is my purpose to avoid as far as possible all theoretical considerations and to deal with it in a manner strictly practical. The question which concerns us as practical men is not exactly how many millimetres of separation are noted on dividing the pubic articulation, or by what fraction of an inch is the diagonal conjugate of the pelvis increased. We wish to know what are the indications for the operation. Does it accomplish what has been claimed for it? Is the patient left in a perfectly normal condition afterward? Incidentally, we also desire to know how far, if at all, pubiotomy is to be regarded as a substitute for the Cæsarean section. I acknowledge that I am not such an enthusiast in favor of symphyseotomy as some of my obstetrical friends, though it is hardly fair to allow one's self to be prejudiced by a single case, which was, perhaps, not a fair test. I conceive that one of the most difficult problems presented to the obstetrician is to decide beforehand whether he can deliver a live child through a moderately contracted pelvis. There are so many factors to be considered—the transverse as well as the antero-posterior diameters of the pelvis, the depth of the symphysis and arch, the size of the fœtal head, the condition of the child, the duration of labor, the condition of the mother, and the previous history of the patient, and last, but not least, the "personal equation," *i.e.*, the skill of the individual operator. The questions at issue are serious and doubtful, and there is abundant room for difference of opinion, as we have observed in every consultation. I confess that it is in just such cases that good judgment and experience count for more than the hard and fast rules of the books. Hardly any two men will agree regarding the exact length of the true conjugate, how then can we be guided by differences of two- or three-eighths of an inch as to whether we shall elect forceps, version, craniotomy, or Cæsarean section? We can afford to split hairs at a society discussion, but not at the bedside. It has doubtless occurred to you, as it has to me, to meet with unexpected difficulty in extraction after version, because we had underestimated the size of the fœtal head, and perhaps we have seen Cæsarean sections in which we have had doubts as to whether we could not have delivered *per vias naturales*. It is because of this uncertainty that conservative men will be slow about adopting symphyseotomy through the fear of being accused of practising it unnecessarily. I certainly lost a child not long since in a case in which this operation was clearly indicated, on account of the great disproportion between the pelvis and the fœtal head. In a case in which I recently assisted Dr. Grandin, I believed that the small child could be delivered without doing pubiotomy, but the operation was clearly justified to the spectators by

[1] Introducing a discussion in the Section on Obstetrics, New York Academy of Medicine, March 24, 1893.

the difficulty attending extraction, even with from four to five centimetres' separation which were thus obtained.

The following are brief notes of a recent case, which may be regarded as fairly successful from an obstetrical stand-point: Maggie K——, I-para, entered the New York Maternity Hospital, December 9, 1892, her confinement being due January 11, 1893. She was regarded as "queer" mentally. Her age was given as twenty-eight, but she is certainly ten years older. Careful measurements, taken independently by Dr. Edgar and myself, gave the following results: Distance between spines, 9½ inches; distance between crests, 10½ inches; external conjugate, 7½ inches; true conjugate, less than 3½ inches; left external oblique, 9½ inches; right external oblique, 9¾ inches; breadth of symphysis, about two inches. Labor began at 5 A.M., February 5th, when the membranes ruptured, but the pains were slight and infrequent, so that at 9 P.M. the os admitted three fingers. Head presenting in O. R. A., and fœtal heart strong. Child large and head could not be made to engage. Patient in excellent condition. After consultation with Drs. Murray and Jarman, I determined to dilate manually, perform symphyseotomy, turn, and extract. Dr. Murray estimated the conjugata vera at barely three inches, the transvere diameter being fairly normal.

The patient was prepared for operation; dilatation was readily effected in a few minutes, and I then proceeded to expose the pubic symphysis by a three-inch median incision, carried well down to the root of the clitoris. The patient was quite stout, and there was considerable œdema of the mons, so that the wound was unusually deep. I cleared away the prevesical fat and fibrous tissue and exposed the anterior surface of the joint, so that I could see just what I was doing. Not having my Galbiati knife at hand, I used an ordinary blunt-pointed curved bistoury, dividing the symphysis from above downward, the urethra being depressed in the usual manner. It was noted by all those present that the separation of the bones only amounted to an inch until the ligamentum arcuatum was divided, when they separated two inches. This is an important point, since it is the custom at the Dresden clinic to preserve the subpubic ligament intact. Profuse venous oozing from the lower angle of the wound was readily checked by packing with gauze. Version was unusually difficult by reason of the great projection of the promontory and the size of the fœtal head. Extraction of the head (although the separation of the bones amounted to two and a half inches) was exceedingly difficult and was effected by Dr. Murray, to whose skilful manipulation I was alone indebted for the delivery of a live child, which weighed 8 pounds 1½ ounce, and was deeply asphyxiated when born. The measurements of the fœtal head were as follows: Occipito-bregmatic, 4½ inches; bi-temporal, 3¼ inches; bi-parietal, 4¼ inches.

It was the unanimous opinion of my colleagues and myself that the saving of the child was to be regarded rather as a fortunate accident than as a foregone conclusion, since the disproportion between the head and the pelvis was so great, even after the symphysis had been divided. On account of the depth of the wound I did not attempt to suture the fibrous tissue in front of the bones, but simply closed the external wound. A strip of rubber plaster, eight inches wide, was passed entirely around the patient's body over the trochanters, the pubic bones being meanwhile approximated by powerful pressure. I noted a tendency on the part of the pre-vesical fat and bladder to project between the ends of the bones, so they were pressed backward during approximation of the joint.

The patient's convalescence was afebrile, but she was restless and sleepless from the outset, and soon developed acute mania, being so violent that it was necessary to restrain her forcibly. During the second week she was delirious, then she sank into a semi-comatose condition, though so far as the results of the labor were concerned she made a good recovery, the wound healing perfectly.

he patient eventually sank into a condition of stupor, and is now, six weeks after the operation, in a state of dementia, with partial hemiplegia and anæsthesia, difficulty in swallowing, paralysis of the sphincters etc. As she has not left her bed since the operation, it is impossible to judge anything about her power of locomotion. She is much emaciated, so that an accurate examination of the symphysis could be made a few days ago, showing the following condition: A separation of about an eighth of an inch can be felt beneath the arch, though it is evident that tolerably firm fibrous union exists. While the separation is only slightly, if at all, increased by forcible abduction and flexion of either thigh, there seems to be a motion of the bones during the manipulation. Firm union was, of course, hardly to be expected, under the circumstances. The child is healthy and is doing well. I have cited this case in order to emphasize certain practical points which I hope will be dwelt upon in the discussion. [April 5th.—An autopsy was performed upon the patient to-day by Dr. Van Gieson, who was unable to discover any cerebral lesion, the presence of which had been inferred. The kidneys showed some evidences of chronic nephritis, though no symptoms of renal disease had existed during life. Through the kindness of the House Physician, Dr. Reynolds, I obtained the pelvis, which shows the interesting fact that firm union had taken place at the site of the pubic section (performed exactly two months before), so that the patient would have had no disability had it been possible to test her power of locomotion.]

The object aimed at in the operation is the delivery of a living child, with a minimum of risk to the mother; hence if the child is dead when delivered, or succumbs within a few hours after birth, the operation cannot be regarded as successful. It is conceded that it is indicated in moderately contracted pelves, without other deformity, (6.5 to 7.5 ctm.—3 to 3½ inches), in which Cæsarean section, if performed at all, would be strictly elective. Now, the question at once arises, Can we promise beforehand, with any degree of certainty, that pubiotomy will be successful, *i.e.*, that a living, healthy child will be delivered? In order to do this it is evident that the conditions must be favorable—the child must be vigorous at the time of operation, the disproportion between the head and pelvis must not be too great, and the condition of the soft parts must be such that there will be no delay in extraction, either by forceps or after version. I would favor the latter before the head is engaged, in view of the considerable fœtal mortality following high forceps. With the mother an old primipara, and the fœtal head unusually large (as in my case), the conditions are not favorable to success.

Symphyseotomy may fairly be pronounced a safe, and not especially difficult, operation, in which the prognosis for the mother is better than in Cæsarean section (1.7 per cent. as compared with 4.1 per cent., according to Leopold's results), provided that both operations are *elective*. The risk of subsequent permanent disability is slight. The amount of separation obtained after division of the joint cannot be predicted, since it varies with the age of the patient and the character of the pelvis.

Wehle,[1] from careful experiments on the dead and living subject, with a separation of 6 ctm. in a generally contracted pelvis obtained a gain in the conjugata vera of 1.2 ctm., in the transverse diameter one of 1.9 ctm., and in the oblique one of 2.5 ctm. It must be confessed that this is considerable, but it may not be enough to offset the obstruction offered by an incompressible fœtal head, with a biparietal of 10 ctm. Under the latter circumstances the preference may be given by some for Cæsarean section.

"**Football Casualties**" is a heading which appears with great regularity in our English contemporaries. The cases vary anywhere from a black eye to a broken spine.

[1] Arbeiten aus der Königlich. Frauenklinik in Dresden, Band I., 1892.

A REPORT OF FOUR CASES OF INJURY TO THE ABDOMINAL VISCERA.

Four Laparotomies—Two Recoveries.

By ARCHIBALD MERCER, A.M., M.D.,

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Following the interesting communication of Dr. Dennis, which appeared in the Record of December 3, 1892, it may not be without interest to publish the following four reports as a contribution to abdominal surgery. At least they will be made a matter of record, and may prove useful in a future compilation of statistics. The reports are sufficiently full to make further comment unnecessary.

Case I. *Gunshot Wound of the Stomach and Liver.*—M. S——, aged twenty-nine, single, a deaf-mute, was admitted to my service at the City Hospital July 25, 1891, at 11.30 P.M. On examination he was found to be suffering from a gunshot wound of the abdomen, which had been accidentally inflicted by himself. The bullet had entered four inches below the left nipple, and one and a half inch from the median line, and its direction was found to be downward and inward. The man was pale from shock and loss of blood, but his pulse was good. He complained of much pain in the epigastrium, and had vomited the contents of his stomach mixed with blood, and afterward again vomited about a pint of blood. A hypodermic injection of ♏. x. of Magendie's solution of morphine was given, and arrangements made for doing a laparotomy.

Ether was used as the anæsthetic, and an incision was made extending from the ensiform cartilage to the umbilicus. Through this opening a bullet wound of the anterior wall of the stomach was seen, and immediately closed with a Czerny-Lembert suture of fine silk. The abdominal cavity was found to be filled with blood and clots, and in searching for the cause of the hemorrhage a 32-calibre bullet was found lying loose in the folds of the intestine. There was no injury to the intestine itself, but there was a laceration of the mesentery three inches in length, evidently having been caused by the bullet. The Czerny-Lembert suture was again employed in closing this wound—a fine cambric needle and 00. silk being used for the stitches. After sponging out the abdominal cavity, the rather profuse hemorrhage still continuing, it was found by a very diligent search that the bullet had passed through the centre of the left lobe of the liver. The incision of the abdominal wall was lengthened, being carried upward and through the ensiform cartilage as far as possible. The liver being drawn down with difficulty, an iodoform tampon was packed into the perforation. This failing to stop the hemorrhage, a silk suture was passed through the liver on each side of the wound and tied. These procedures eventually stopped the hemorrhage, except from the recently made needle punctures, and these were each touched with a cautery needle heated to a white heat. The wound through the integument made by the bullet was closed by one deep suture passing entirely through the tissues. The abdominal cavity was washed out with warm Thiersch fluid and sponged as clear as possible. There was still a little bleeding from some point which we were unable to find, and the patient's condition becoming alarming, it was decided to close the abdomen as rapidly as possible. The peritoneum was brought together with fine silk and the abdominal wall with coarse silk suture. It was necessary to give brandy hypodermatically many times during the operation. The part was dressed with iodoform gauze and combined bichloride dressing, and the man left on the operating-table surrounded with hot-water bottles, and in an hour or two removed to the ward. During the day he received whiskey and digitalis by hypodermic injection, also sufficient morphine to keep him quiet. He had no nourishment during the next twelve hours. The bladder was relieved several times by the use of the catheter.

September 27th, A.M.—Pulse, 114; temperature, 98.4° F. Had a fair night. Since midnight has taken whiskey and peptonized milk in small quantities every hour. Evening temperature, 101.2° F.; pulse, 114.

September 28th.—The nourishment was to-day increased to two ounces of milk and whiskey or beef-tea, given every alternate hour. A rubber tubing ice-coil over the abdomen gave much relief to the pain and controlled the temperature.

September 29th.—Retains everything taken into the stomach, and still requires morphine to control the pain. The dressings were removed to-day, and the incision was found uniting by primary union in all but one small spot.

September 30th.—Bowels moved with the aid of an enema, and voluntarily the next day. From this time on the nourishment was gradually increased and the use of morphine was stopped.

On August 1st the dressings were changed and every other suture removed, and considerable pus escaped. The parts were thoroughly irrigated with bichloride solution. The next day the whole line of incision gave way and much pus was found between the integument and peritoneum, which latter was found to have united.

From this time every attention was given to cleanliness by free and frequent irrigations, but the wound was held together only by adhesive straps. The nourishment was increased until the man took daily as follows:

Milk	℥ xl.
Beef-tea	℥ vj.
Whiskey	℥ iv. to ℥ vj.

It again became necessary to resort to the use of xxv. to xxx. ♏. of Magendie's solution daily to relieve the pain. From this time the patient emaciated rapidly and lost strength, until August 12th, when he refused nourishment. He died August 16th—twenty-two days after the injury.

Autopsy, August 17th.—Body much emaciated. The bullet had passed between the cartilages of the seventh and eighth ribs. The intestines were found adherent to the liver, to the abdominal walls, and to each other. The cavity of the abdomen was absolutely dry. The bullet had passed through the left lobe of the liver, and through the anterior and posterior walls of the stomach. It is interesting here to mention that the source or the hemorrhage, which we were unable to find at the time of the operation, must have been from this undiscovered wound through the posterior wall of the stomach; the organ being distended at the moment of the injury, and empty from the repeated emesis after his admission to the hospital, the position was changed, and thus the hole was overlooked in our efforts to find it.

We found the whole omentum crowded up between the stomach and liver, and adherent to both.

The liver itself was adherent to the diaphragm, and in the adhesions over the left lobe an abscess containing two ounces of pus was found. This communicated with another on the under-surface of the liver through the penetrating wound. There was no sign of reparative action in the liver wound. The omentum, which was adherent to the under surface of the liver, had formed a complete pocket for the collection of pus. The opening in the anterior wall of the stomach was sealed by the omental adhesions, but no process of repair had gone on, but rather the contrary, as the opening was three-quarters of an inch in diameter. The posterior opening into the stomach was sealed by adhesions to the spleen and pancreas.

The condition was remarkable. The man, after the first three or four days, was taking over fifty ounces of fluid in the stomach daily, yet so strong were the adhesions of the organ to the surrounding parts that no fluid escaped into the abdominal cavity, and it also required considerable force to separate these adhesions.

Case II. *Lacerated Wound of the Abdomen and Intestine.*—G. S——, an Italian, aged forty-seven, was admitted to my service at the City Hospital on Thursday, September 24, 1891, at 11 P.M., being one of the victims of the Boyden Street explosion.

A hurried examination of the patient showed almost the entire mass of the small intestine protruding from a ragged lacerated wound of the abdominal wall, about midway between the umbilicus and the anterior superior spinous process of the ilium of the left side. In the protruding gut there were found two lacerated wounds of the ileum, about four inches apart, one cutting entirely across the lumen of the gut and extending one inch into the mesentery, and the other nearly through the gut. The intestine was ligated on the distal and proximal sides of the wounds; and the mass of protruding bowel, except that part which was wounded, was pressed back into the abdominal cavity and the part covered and secured by a compress saturated with a solution of 1 to 80 carbolic acid.

At three o'clock in the morning the man presented a fair appearance and was prepared for operation. Ether was the anæsthetic used. The ends of the lacerated intestines were approximated and united by the Czerny-Lembert suture, fine silk and a fine straight needle being used for the purpose. The wound in the mesentery was closed in the same manner. The temporary ligatures were removed from the intestine, and after a careful inspection of the rest of the gut the part was returned to the abdominal cavity. There was some blood and fæces in the cavity, and it was very thoroughly irrigated with warm Thiersch's fluid. The laceration of the abdominal wall was then brought together with deep and superficial silk sutures. During the operation the man received several hypodermic injections of brandy, and before the operation two of Magendie's solution. The abdomen was dressed with iodoform gauze and combined bichloride dressing of cotton and gauze. He was put to bed and surrounded with bottles of hot water.

September 25th, 10 A.M.—Pulse, 92: and at 5 P.M. temperature, 101° F.; pulse, 84. At this hour he received a hypodermic injection of ℥. vj. of Magendie's solution in consequence of severe pain. During the evening he took small quantities of milk and brandy and cracked ice at frequent intervals, this being the first nourishment taken since the evening before.

September 26th.—The patient passed a fairly comfortable night, retaining his nourishment, and sleeping most of the time. Passed water voluntarily and had but slight pain, for which he was given ℥. vj. of Magendie's solution about every six hours. The pulse ranged from 80 to 90, and temperature from 100° to 101.4° F.

September 27th.—Was given milk, ʒ ij., with whiskey, ʒ ij., every three hours, and beef-tea in concentrated form from a pound of beef. The pulse and temperature ranged as before.

September 28th.—Complained of pain in the abdominal wound, and in his thigh. Pulse, 100; temperature, 102° F. The dressings were removed, and at the painful point in the thigh, which was below Poupart's ligament, and to the inner side of a line drawn from the anterior superior spinous process of the ilium was found a red tender spot giving a sense of fluctuation and also the feeling of some hard foreign body under the skin. An incision was made directly over this point, and under the fascia lata was found an abscess which discharged a foul-smelling pus and a piece of copper measuring one and a half inch by one and three-sixteenths, and a quarter of an inch in thickness, with three thicknesses of cloth the size of the copper and attached to it. This was a piece of the exploded shell, which had passed from the abdominal cavity to the thigh to the point where it was removed. The abscess cavity was irrigated with a bichloride solution 1 to 5,000, and in doing this it was found that there was no connection with the abdominal cavity, although it is beyond question that the piece of shell passed from the abdominal cavity to the thigh. The part was dressed with a 1 to 100 carbolic acid solution and the compresses frequently changed.

September 28th.—Evening temperature, 99.4° F., and after this it did not rise above 99.4° F.

September 29th.—The man appears bright and has no pain. The nourishment was increased and the wounds kept absolutely clean by frequent irrigation and change of dressings. The abscess in the thigh discharges profusely, but is not offensive. A line of redness was found on the skin, extending from the thigh to the wound in the abdomen, and the sutures in the abdominal wound were found to be giving away. The abdomen and thigh were covered with a gauze dressing, saturated with a 1 to 40 solution of carbolic acid.

September 30th.—Temperature, 98.3° F. The man complained of an urgent desire to have his bowels move, and a small enema of warm water was given and produced a large normal defecation. The wounds were looking much better, except that the pus from the wound in the thigh was found to have burrowed downward. An opening four inches below was made and a drainage-tube inserted.

October 1st.—Temperature, 98.3° F.; pulse, 56; respiration, 16. The same treatment was continued and the nourishment increased by the addition of an egg daily and peptonized milk instead of ordinary milk.

On October 2d the bowels moved voluntarily. From this time until October 7th the patient continued to do well. On that day the wound of the abdomen was found to be suppurating and was packed with iodoform gauze, as was also the abscess cavity in the thigh. The patient was now taking sixty ounces of peptonized milk and three of whiskey in the twenty-four hours.

October 20th.—The man is doing well in every particular. The wounds are each irrigated daily with a 1 to 5,000 bichloride solution, and dressed with iodoform gauze. Patient allowed partly solid food.

November 2d.—Patient allowed to sit up a part of each day. The dressings have been changed to balsam Peru gauze.

From this date the man continued to improve; he gained rapidly in weight and strength, and was discharged from the hospital, November 16th, cured and able to resume his occupation.

Case III. *Stab Wound of the Abdomen and Intestines.*—John B——, aged twenty-nine, teamster, single, was admitted to my service at the City Hospital at 3.40 A.M., April 26, 1891, suffering from a stab wound of the abdomen.

It was learned that the man had been injured about half-past two in an Italian street affray. After receiving the injury he had walked a distance of over half a mile, and was then found by the police lying on the sidewalk and endeavoring to hold up a mass of protruding intestines. He was conveyed by ambulance to the hospital, a distance of a mile and a half. On his arrival, and the nature of the injury having been ascertained, he immediately received a quarter of a grain of morphine hypodermatically, the protruding intestines were covered with towels wrung out in hot solution of bichloride of mercury, 1 to 5,000, and several bleeding vessels were taken up with artery forceps. On my arrival at the hospital, an hour later, the man was found to be in a good condition considering his injury; he had no pain and was quite fully under the effects of the morphia.

There was a protrusion of three feet of the small intestine from a wound in the abdominal parietes two inches long, midway between the umbilicus and the anterior superior spinous process, on the left side. An examination of the protruding gut revealed two incised wounds extending through all the coats, about three-quarters of an inch in length, through which fæces was escaping. There was also a wound of the mesentery of equal size, close to its attachment to the intestine. The man was etherized and the wounds were all closed with fine silk, the Czerny-Lembert suture being employed. A further examination of the intestine, by drawing it out from the abdominal cavity, revealed a third wound, which did not, however, extend through the mucous coat, and a second wound of the mesentery, two inches long, and from this wound we found much arterial hemorrhage. These wounds were closed in the same manner as the preceding.

The external wound of the abdominal wall was enlarged and the abdominal cavity thoroughly cleansed by sponging, and the protruding intestines returned. The edges of the peritoneum were united with a continuous suture of fine silk. The left rectus muscle, which was cut nearly through from the outer edge inward, was brought together with heavy silk suture, the aponeurosis was stitched separately, and finally the external opening was closed with deep and superficial sutures. The wound was dressed with iodoform gauze and covered with a combined dressing of bichloride of mercury, and over the whole a many-tailed bandage, the whole operation being as nearly aseptic as possible.

The patient was placed in bed at eight o'clock with a temperature, of 98 2° F.; pulse, 102, full and strong; respiration, 20, and up to this time he had no stimulant and but two injections of morphine. The man had quite recovered from the anæsthetic in three hours, and complained of pain in the abdomen and of nausea.

From this point the subsequent history will be given only partly in detail, giving the principal points in the patient's recovery. At 5 P.M., pulse, 116; temperature, 99.3°F.; respiration, 18. The man has vomited several times during the day, but is now able to retain teaspoonful doses of milk and whiskey given every half hour. At this time is complaining of great thirst and is in a profuse sweat.

April 27th.—At 12 noon, pulse, 128; temperature, 101.4° F.; respiration, 24. During the last twenty-four hours has had ℥. xxvii. of Magendie's solution hypodermatically, and has retained all the milk and whiskey given. Has slight pain in the abdomen and at times feels nauseated. Was ordered three ounces of peptonized milk every two hours, and beef-tea and whiskey every four hours.

The evening temperature was 102.2° F., and the pulse 96; respiration, 16.

April 28th.—Has but slight pain and has retained his nourishment and feels a desire to have a movement of the bowels. Temperature, 99.4° F.; pulse, 96. During the evening the beef-tea was discontinued because it produced nausea; during the last twelve hours the man retained ten ounces of milk. The evening pulse and temperature varied but slightly from the morning report.

April 29th.—Noon, temperature, 99.2° F.; pulse, 80. During the night passed gas frequently from the bowels. Evening temperature, 100.3° F.; pulse, 94. Man was restless during the afternoon and had much pain from gas in the bowels.

April 30th.—Noon temperature, 99.2° F.; pulse, 80. Has no pain; has retained all nourishment and slept well during the later part of the night. Evening temperature, 101.4° F.; pulse, 92.

May 1st.—Noon temperature, 99° F.; pulse, 80. Last evening the patient had a large normal movement from the bowels. To day the dressings were removed. The external wound was found closed by primary union; no pain or tenderness, no tympanites.

May 2d.—Noon temperature, 101.2° F.; pulse, 80. During the night the man was slightly delirious, and opened the outer dressing, pulled out the aseptic gauze, and partially opened the abdominal wound.

May 3d.—Temperature, 102.2° F.; pulse, 84. There is a slight discharge from the abdominal wound. Several stitches were removed and the wound opened down to the rectus muscle, when a small cavity filled with an offensive pus was found. The part was freely irrigated with a bichloride solution, a drainage-tube inserted, and the parts dressed with bichloride gauze.

May 4th.—Temperature, 98.3° F.; pulse, 60

From this time the wound was irrigated several times daily, the abscess did not extend below the muscle, nor did the irrigating fluid enter the abdominal cavity, and after this the temperature remained practically normal. The functions were performed regularly, the appetite was good, and the patient in every way comfortable.

May 10th.—To day three stitches came away in irrigating the abscess cavity, being the heavy silk used in uniting the rectus muscle.

May 16th.—Patient allowed to sit up in bed and had sparingly of solid food.

May 28th.—Was to day able to walk the length of the ward—over a hundred feet. From this time the recovery was uninterrupted, and he was discharged from the hospital, cured, June 14th, not feeling any inconvenience as a result of his injury.

CASE IV. *Stab wound of the Chest (Heart) and Liver.*—D. F——, an Italian, aged thirty-six, single, laborer, was admitted to the service of my colleague, Dr. L. E. Hollister, at St. Barnabas's Hospital, on Saturday, September 26, 1891, at 11 P.M.

The patient had been stabbed in a street brawl about an hour before admission. An examination of the injuries revealed a stab-wound in each side of the chest in nearly corresponding positions, being about three inches below the nipple and on a line midway between the nipple and median line. A third wound was found an inch to the right of the median line, about half way between the ensiform cartilage and the umbilicus. The wounds of the chest did not appear to be severe. There was no symptom of injury to the lungs nor any evidence of a wound of the heart. The pulse was fairly good, and the respiration normal. The patient's condition, however, showed the effects of a loss of blood, and a further examination of the abdominal wound showed that it had penetrated through into the abdominal cavity. As the man was evidently having a serious hemorrhage from some point it was determined to do a laparotomy. Ether was given, and Dr. Hollister made an incision from the ensiform cartilage to below the umbilicus. The cavity of the abdomen was found filled with blood and clots, and a hurried inspection of the viscera revealed a wound of the right lobe of the liver, cutting entirely through its edge, and extending upward an inch from the free border. From this wound there was profuse hemorrhage, which required a long time to completely check, and it was only after trying many expedients unsuccessfully that at last we heated a scalpel to a white heat and applied it several times to the cut surfaces, which completely controlled the hemorrhage. We found iodoform gauze, fine suture, and compression, all of no avail. It has since occurred to me to try in another similar case the experiment of using a white-hot needle, and to thread it after cooling, as it was from the needle punctures that we had obstinate bleeding as well.

After all bleeding was controlled, the cavity of the abdomen was cleansed by sponging. The penetrating wound of the abdominal parietes was closed with two deep sutures, and the incision brought together with silver-wire suture. The dressing was iodoform gauze, and combined bichloride dressing. At the end of the operation the man's condition was good. The pulse was rapid, but of a fair quality. He was ordered ℥. x. of Magendie's solution of morphine hypodermatically, and rectal injections of hot infusion of coffee as a quick stimulant.

The patient lived but three hours, having, however, fully regained his consciousness first. He died at seven o'clock.

The autopsy was made the same day, with the following result: The wound of the right chest was superficial, while that of the left side had penetrated the chest in the sixth intercostal space, going through the pericardium and ventricle of the heart, and inflicting an injury to the opposite wall of the ventricle, but not penetrating it. The pericardial sac contained eight ounces of blood-clots and fluid blood. There was no injury to the lung. The knife in entering the abdomen had inflicted also a slight wound of the gall-bladder, while injuring the liver, and the gall-bladder was empty.

It seems well worthy of record that a person could receive such an injury of the heart, and at the same time such an injury of the liver, yet live for over twenty hours and not succumb while under the operation.

MUCOUS PATCH OF CONJUNCTIVA, COMPLICATED BY A PSEUDO-MEMBRANE.[1]

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Josephine Q——, aged twenty; nationality, Irish; occupation, chambermaid; presented herself, November 23d, at the Manhattan Eye and Ear Hospital, and was referred to me, through the courtesy of Dr. Webster, for diagnosis and treatment.

She complained of having caught cold in her eyes, referring to the left one, however, as being the most inflamed. Upon examination I found the right eye to be affected by a mild conjunctivitis, both the ocular and palpebral conjunctivæ of the left eye were congested; the latter, besides being quite swollen, was the seat of a croupo-exudative inflammation, ropy muco-pus and fibrin covering the mucous membrane of the lower lid, which presented, in addition, on its surface—after the exudation had been removed—in its middle two-fourths, close to the fornix, a grayish aspect in the form of a patch, which was not detachable, measuring in length circa 12 mm., in width, 2 mm., being raised ½ mm., and infiltrated to a like degree.

The cornea and iris were normal in both eyes; no circumcorneal injection. The ophthalmoscope and ciliariscope failed to disclose any lesion of the media or fundus oculi. It may be mentioned parenthetically that an error of refraction—hyperopia—existed in both eyes.

The general appearance suggested at once a croupous conjunctivitis of the left eye, but before deciding upon a positive diagnosis I considered it indispensable to inquire further into the patient's history and endeavor to discover some concomitant symptoms which might bear relation to the ocular inflammation.

The woman was extremely cachectic. On her face was found an eruption consisting of numerous dark copper-colored patches, varying in diamater from 6 to 8 mm., which was evidently not pruriginous as traces of scratching were not present.

The chest and back were exempt; seborrhœa capitis not well marked. The throat showed the typical bilateral erythema, no ulceration visible. Enlargement of the preauricular glands on the left side; the post-cervical, epitrochlear, supraclavicular, and axillary lymph bodies likewise increased in size. She was unwilling to make any admission of direct infection, and seemed ignorant of the disease from which she was suffering, but the absence of scars upon the mouth, face, or hands, precluded the probability of innocent contraction.

She remembered, however, having had pharyngitis and alopecia some ten months previous. At the time of my seeing her first (November 23d) complained of having headache, frontal and parietal. Upon percussion neither pain nor tenderness was experienced, demonstrating the absence of periostitis; the former was probably due to her hyperopia, and the latter to the specific process. The symptoms which have been mentioned are pathognomonic of but one disease, viz., lues, and the patient was still in the constitutional or second stage; therefore it became evident that the inflammation of the lid was a mucous-membrane manifestation of the general disease, viz., a mucous patch. The only three conditions likely to produce this grayish appearance of a mucous membrane are: 1, The use of an irritant—nitrate of silver or carbolic acid: 2, diphtheritic process; or 3, specific disease.

The application of any irritant was denied by the patient; as regards the diphtheritic infiltration one would expect to find more stiffness of the lid; the presence of specific disease is therefore reasonably demonstrated as the cause of the deposit.

The condition of the conjunctiva demanded local treatment, and I decided upon the removal of the proliferative mass for the following reasons: 1. It acted as a foreign body and was liable to degenerate and form an ulcer, with subsequent deformity to the lid. 2. Considerable swelling existed, and in consequence there was tissue to spare. 3. The patient's appearance indicated that sufficient cleanliness would not be observed in the care of the eyes were one to prescribe mild local treatment. 4. There was reason to fear that she would not continue the internal treatment for any length of time, and consequently the local irritation, instead of being ameliorated, would become aggravated.

The operation under cocaine consisted in seizing the mass by means of a mouse-toothed forceps and carefully dissecting it with a scalpel from its conjunctival attachment, the slight hemorrahge occasioned by this procedure, in causing depletion of the congested vessels, had a beneficial effect upon the conjunctivitis, the membrane becoming immediately much paler. I append the following notes, containing a history of the patient's improvement during the following three weeks:

November 23d.—Prescribed a collyrium of cocaine and ac. boric. as a local anæsthetic and antiseptic; Cleat. hyrergyri (twenty per cent.) for inunction.

November 29th.—L. E., some redness and swelling of conjunctiva, probably due to the cold weather at the time of the operation. R. E., conjunctivitis and episcleritis; nodular swellings visible under the conjunctiva. Ordered ung. hydrargyri flav. for R. E., and solution of alum for both eyes. L. E., conjunctival swelling considerably reduced, very little redness remaining. R. E., Episcleritis and conjunctivitis improving; nodular swellings smaller.

December 5th.—L. E. normal; no swelling, no removal of mucous patch; no trace left of excision; preauricular glandular enlargement scarcely perceptible. R. E., episcleritis disappeared, slight subconjunctival injection still remaining.

December 9th.—L. E. continues as before. R. E., subconjunctival congestion no longer apparent, being replaced by marginal keratitis and small phlyctenula in upper portion of cornea. Integument of patient clearer, appetite better.

December 12th.—L. E. normal, preauricular glands no longer enlarged. R. E., phlyctenula reduced in size to ½ mm. in diamater, no circumcorneal injection.

December 15th.—With this day end the data of this interesting case. L. E. continues normal in every respect. R. E. same, conjunctiva pale and normal. No congestion of subconjunctival vessels. States that she feels improved in every way. All the glands are becoming smaller, her pharyngitis is improved, her skin much clearer, and her general appearance denotes a marked improvement.

Patient left the clinic with instructions to continue the use of the inunction and of the iodide of potassium which had been added to the treatment, and promised to report.

The case just narrated is interesting and unique for several reasons; croupous and diphtheritic conjunctivitis are not especially rare, the same applies to a conjunctival mucous patch, but when we find both occurring simultaneously and together, an element of rarity and obscurity is manifest. Of the fact that the patient had specific disease there is no doubt: that she was also in the second stage seems clear, as there were neither symptoms of periostitis nor of necrosis, and the skin lesion was not that of the late-formed tubercular syphilide. We have also her statement, accepting it at its value, that ten months previous she had alopecia; that would still bring her within the pale of the constitutional period.

A mucous-membrane manifestation of the second stage is that of the patch, and judging from the acute conjunctivitis which the patient had when I first saw her, the process could not have been going on longer than twenty-four hours; the epithelium of the plaque was apparently uninjured: usually this is not the case, but we rarely observe them as early in the course of development as was the opportunity enjoyed here. It is rather difficult to account for the joint occurrence of the patch and of the

[1] Read before the Academy of Medicine, Ophthalmological Section, January 16 1893.

croupous conjunctivitis. I incline to the belief that the latter caused the former, as the local lesion of specific disease is generally occasioned by irritation; it might be argued conversely that the anatomical position of the patch would occasion the retention and adhesion of an exudation, thus forming a pseudo-membrane. I consider the former to be more worthy of credence.

As regards the treatment of a mucous plaque I do not think that any rule can be laid down, especially not for one of the conjunctiva. In suitable cases preference may be given to conservative treatment, *i.e.*, local application of mild astringents, absolute cleanliness, and saturating the patient's system with mercury. When, however, it is to be feared that the patient will neglect to observe the surgeon's orders, my opinion is that its removal, leaving a clean wound, followed by appropriate constitutional medication, forms the treatment *par excellence*.

The tissue was prepared for microscopical examination, and after examining fifteen sections I deduced the following: A connective-tissue stroma containing small round cells in large numbers; near the epithelial border they are more closely aggregated. The deeper layers of the epithelium, with the exception of the centre portion, are intact; at this part ulceration commenced and the leucocytes escaped. Adhering to and covering the surface of this inflammatory mass is a reticulum of fibrin enclosing degenerated blood-corpuscles and the round cells which had emigrated through the incipent denudation of the epithelium. Of two blood-vessels—both cut transversely—seen in the removed tissue, the walls of one were infiltrated by the leucocytes, the lumen containing red blood-cells in degeneration; the other one, walls and interior, nothing but small round cells.

The above demonstrates that such an inflammation occurring on the mucosa of a luetic patient in the second stage of the disease must be a mucous patch.

Medical literature is comparatively reticent upon the subject of secondary lesions of the conjunctiva; however, the following well-known works mention the existence and occurrence of this condition:

Noyes:[1] "Secondary lesions occur oftenest on palpebral portion of conjunctiva. Enlargement of the pre-auricular gland of same side." Swanzy:[2] "Frequent occurrence on edge of lids." De Wecker:[3] "Do not differ from those on other membranes." Fuchs:[4] "Among the greatest of rarities." Stellwag:[5] "Great ravages of specific ulcers, forming cicatrices consisting of tendinous white cords devoid of cilia. Subsequent deformity to the lids." C. S. Bull,[6] two cases: (1) "One of young man with mucous patch one-half inch long, in width long of diameter of lid; ulcerated and healed with entropion." (2) "Another case healed without ulceration, but deep red tint of conjunctiva showed seat of existence." Galezowski:[7] "Has seen a specific papule at inner angle of eye, leading to marked ectropion." Quotes Fournier: "Occurrence of mucous syphilides at fornix or caruncle as superficial erosions." Schmidt-Rimpler:[8] "Condylomata of conjunctiva." Williams:[9] "Principally occurring on ocular conjunctiva." Desmarres:[10] Cites cases of condylomata of conjunctiva some hard, others soft. Advises when they have not commenced to ulcerate "to cut them off with scissors curved on the flat." Von Graefe and Saemish:[11] "Occurrence of mucous patches as one of the rare forms of eye disease." Quote Estlander:[12] "A case of a patch 5 mm. long, 2 mm. wide; painful, gray color, slight injection around the papule." De Wecker:[13] "Case mistaken for an epithelioma shown to be a mucous patch by course of treatment."

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[1] Noyes: Diseases of the Eye, p. 327.
[2] Swanzy: Diseases of the Eye, p. 123.
[3] De Wecker: Traite Maladies des Yeux, p. 412.
[4] Fuchs: Trans. edition Ophthalmology, p. 104.
[5] Stellwag: Diseases of the Eye, p. 432.
[6] Bull, C. S.: Journal of the American Medical Sciences, October, 1888, p. 400.
[7] Galezowski: Maladies des Yeux, p. 248.
[8] Schmidt-Rimpler: Ophthalmology, p. 388.
[9] Williams: Diseases of the Eye, p. 57.
[10] Desmarres: Traite desMaladies des Yeux, p. 159.
[11] Von Graefe und Saemisch: Augenkrankeiten, p. 150.
[12] Estlander: Zehend. klin. Monatsch., 1870, p. 261.
[13] De Wecker: Traite des Yeux, 2 ed., p. 177.

TREATMENT OF FRACTURE OF THE INFERIOR MAXILLARY — THE INTERDENTAL SPLINT.[1]

By RICHARD GRADY, M.D., D.D.S. Balt.,
Editor of the American Journal of Dental Science.

Treatment of fractured lower jaw by bandages has been found unreliable. A notable case is that of Hon. Wm. H. Seward, in which eminent surgeons in Washington signally failed to secure by bandages and ligatures coaptation of the fractures received before he was cut on the night President Lincoln was assassinated.

When swelling sets in through the pressure of bandages the muscles tend to displace the parts; moreover, by interfering with the circulation the union of the bone is retarded, teeth loosened by the injury are left unsupported, and motion of the cheeks and lips is painfully restricted.

Of the methods used to supplement bandages, none is superior to the interdental splint. When a well-adapted splint is applied, the parts around the bone are to a great extent a counter-support to the splint, so that the broken jaw, together with any teeth loosened by the injury is held securely in place until the fracture is reunited and the teeth have become firm.

Mr. Henry I. W——, aged thirty-two years, was frightfully injured, while playing foot-ball, near Fairy Grove. Mr. W—— was running at great speed after the ball, and did not notice a tree which stood in his path. He struck his head and face against the tree with terrific force, breaking his lower jaw in two places, and his nose on both sides, and cut his head badly. He was carried by some friends to Bay View Asylum, where he was attended by Drs. Wilson and Fore. The doctors were compelled to wire Mr. W—— jaw in order to get it into the proper position.

In August, 1892, I applied a vulcanized hard-rubber splint (see woodcut), to this double-fractured jaw, co-

operating with J. D. Blake, M.D., Professor of Surgery in the Baltimore Medical College, and assisted by C. J. Grieves, D.D.S., Demonstrator in the University of Maryland, Dental Department. The fractures were in the lower maxillary, between the bicuspids on the left side and beyond the teeth on the right side, at the angle. The splint was fitted to both upper and lower teeth (as is the rule in all fractures back of the teeth), so that the jaw had no motion. Small openings were made in the splint opposite particular teeth, to observe how the jaw stood in the splint and for the purpose of syringing the parts to keep them clean. The opening in front was large enough for the passage of a feeding tube.

The fragments of the lower jaw were not only secured relatively to each other, but also to the upper jaw. The splint was worn twenty-eight days. The result was thoroughly satisfactory.

[1] Read before the Association of Dental Surgeons [illegible] Md., December, 1892.

FOREIGN BODIES IN THE STOMACH, WITH REPORT OF A CASE.

By CAROLINE S. PEASE, M.D.,

RESIDENT PHYSICIAN HUDSON RIVER STATE HOSPITAL, POUGHKEEPSIE, N. Y.

THE following case, occurring in our wards recently, is unusual enough to be of interest to all practitioners of medicine. It is of especial value to those of us engaged in the care and treatment of the insane, teaching, as it does, the necessity of unintermitting surveillance, day and night, of patients known to have the depraved appetite, so often seen in the insane, for extraneous matter, as rags, paper, hair, filth, etc. It should be of value to the general practitioner as a guide, in some measure, to a solution of the problem what an abdominal tumor presenting unusual features may be.

In making my regular visit through the women's wards of the hospital, January 13, 1893, my attention was called to patient A. B——, a girl, eighteen years of age, admitted ten months previously, suffering from acute mania. Remissions and exacerbations had alternated since her admission, and she was now emerging from a period of violent mania. I found her this day in bed, quiet and controlled mentally, but suffering considerable abdominal pain. This was accompanied by slight diarrhœa.

On examination I found some abdominal tenderness, but the interesting discovery was that of a tumor immediately beneath the abdominal wall, beginning in the median line, one inch above the umbilicus, and extending four inches to the left, and apparently about two to three inches in breadth. The tumor was firm and resisting, yet quite freely movable. At times crepitus could be obtained. Throughout her subsequent illness it was observed to change its position from time to time, according to whatever position was maintained for any considerable length of time by the patient. At one time only, I observed it to extend two inches below the umbilicus.

I diagnosed the case, after a careful examination, as in all probability a mass of foreign matter ingested—to which diagnosis I was aided by having seen, some years before, in the office of my friend Dr. William Finder, of Troy, N. Y., a specimen removed by him post mortem, and by the statement of the attendant that the patient had been repeatedly detected trying to eat paper, garters, etc.

I reported the case at once to the assistant in charge of this department of women, and the patient was duly examined by each of the staff. None of them agreed with my diagnosis.

From this time the patient kept her bed and steadily failed in strength and flesh. There was anorexia, though but little vomiting at any time. Diarrhœa, though several times occurring, at no time reached a large number of movements. The dejections contained at one time only a few flecks of blood, and at another time the stool was of muco-purulent matter; aside from these they were of ordinary diarrhœal character, and not more than one or two in number daily—while at times the bowels were not moved for two days. The vomited matter was either the recently ingested food (liquids) or mucoid in appearance, at no time blood or "coffee-grounds," and at no time did she vomit more than three times in the twenty-four hours—often not at all for days together.

January 23d.—The surgeon-in-chief of a neighboring general hospital was called in consultation, and advised against an exploratory incision. I still remained alone in the diagnosis of a foreign body. The patient failed steadily from this time on, and February 9th it was decided to call in a neighboring surgeon and make an exploratory incision. The surgeon was telephoned for, the physician in charge went to prepare the patient, when she was discovered to be in a moribund state, and died three hours later, without surgical interference. An autopsy was held, when the "tumor" was found to be a firm mass, extending from the œsophagus through the pylorus, made up of the patient's own hair principally, but containing, besides, shreds of cotton and woollen goods, strips torn from the rubber protective sheet of her bed, and pieces chewed from the lacing-cord of a camisole—presumably when worn by another violent patient, since they lace behind and she could not have reached her own. This mass weighed on removal, and after having been thoroughly rinsed to free it from extraneous matter, sixteen ounces—this weight being the same as that of the specimen found by Dr. Finder, though the shape varies somewhat. In its longest horizontal diameter it was nine inches; length of perpendicular portion, five inches; circumference, at point just to left of greatest curve, nine inches; length of cord at pyloric end, thirty-four inches. The stomach was somewhat inflamed, and a small ulcer was found.

In making a correct diagnosis of this case, while the physical examination made it very clear to me that the location of the tumor was in the stomach, and not, as my colleagues believed, the spleen, I was aided, first, in believing it to be a foreign mass by the recollection of Dr. Finder's case; the subsequent clinical history daily deepening my conviction that we had to deal with a case of the same type. I had then seen no published report of his case, but am now indebted to him not only for a verbal history, but for the volume of "Transactions" in which his report lies entombed. And in this connection I may add that Dr. Finder stated to me a few days since that he had been deterred for years from giving his case to the general profession, through one of the journals, by the belief that in reporting it to the Association he had parted with the right to use the facts contained therein in another report of the case. This is to be regretted, since the case is both intrinsically interesting and well reported—and his report shows the result of labor in searching the annals of the past for similar cases. By his kind courtesy I am permitted to use any portion of his article. I quote as follows:

"I found the patient in great pain, and as even the slightest movement increased the same, I made but a superficial examination. She was greatly emaciated, and through the thin walls of the abdomen a tumor could be distinctly felt. Its position extended from the epigastric, through the umbilical, to the hypogastric regions, rather more to the left of these, beginning at the left sternal portion of the ribs, and ending about two inches above the brim of the pelvis. Under the touch this mass felt very hard. The patient was unable to take any nourishment as there was a constant retching, and these efforts to eject something were unsuccessful. . . . She lived about ten or twelve days after this examination, gradually growing weaker, and finally died from exhaustion due to starvation. . . ." At autopsy "found all the organs in a healthy state except the stomach; this was displaced by the weight within, and instead of being transverse to the axis of the body, it was parallel to it. There were several spots of congestion to be seen upon its surface. But the interesting part was the opening of this organ. Even beforehand we could feel something hard and loose within. As I cut through the walls of the stomach my knife touched something which was firm and hard—and there appeared in the line of the incision two masses of hair. The masses of hair had caused ulceration of the walls of the stomach in two places, exposing the muscular layers, and very nearly perforating the same. Their combined weight on removal was sixteen ounces. They are made up of hair, both human and from the horse, also sewing threads of various kinds, grasses, and woody fibre of plants. In form the larger mass had assumed the shape of the stomach, measuring on its greater curvature 19 ctm., or seven and a half inches; on the lesser, 11 ctm., or about four and one-third inches. Its circumference is 18 ctm. in its largest part, or about seven and one-fourth inches.

The smaller mass is more circular in shape, and measures, on its greatest circumference, 13 ctm., or five and one-eighth inches.

"It is to be regretted that an operation was not undertaken, to explore, if for no other reason. Had an operation been performed, we might in all probability have added another to the successful list of abdominal surgery in America."

I may add that Dr. Finder's specimen is deposited with his alma mater, the College of Physicians and Surgeons.

I am unable to state what cases may have been reported in medical journals of recent years, since my attention had not been sharpened by a case under my own personal observation; but our great teachers of surgery give it but a passing notice, if any.

Bryant, 1872, says only: "A foreign body taken into the stomach may be ejected by vomiting, retained in the stomach, or pass onward. When retained it may rest there without giving rise to any serious symptoms, a rare result, or set up ulceration, which may in its turn give rise to a fatal peritonitis." He then gives the classical instances of the sets of false teeth swallowed by two women, and of one set being ejected after many days by vomiting, while the other continued in its downward course and was passed per anus; and of the sailor who swallowed the numerous knives, mentioned elsewhere in this. He adds to these the case of Poland's lunatic, who died from ulceration of the duodenum, and in whose stomach was found a selected array of small hardware weighing forty ounces.

In concluding the narration of these cases he says: "When the foreign body is large, and clearly cannot be passed, the surgeon would also be quite justified in opening the stomach by gastrotomy, at least seven cases being on record in which success has followed this proceeding." But he gives no history of these cases, nor does he tell us where they are recorded.

Habershon, in his work on "Diseases of the Abdomen," third edition, 1878, devotes this much attention to the subject: "Accumulations of hair and string have been found in the stomach, as in a case recorded in the fourth volume of the Clinical Society's "Transactions."

He then dwells minutely upon the case of the American sailor and the clasp-knives mentioned elsewhere in this. No word regarding diagnosis, prognosis, or surgical treatment of these "accumulations of hair and string," in a volume of six hundred and eighty-six pages devoted to the potentialities of the abdomen.

Clarke, in his "Manual of Surgery," 1879, makes no mention of these cases.

Gross, fifth edition, 1872, says: "Foreign bodies, varying much in their character, occasionally descend into the stomach, and, becoming arrested there, cause great distress, and sometimes even death.

"The astounding faculty which the stomach possesses of accommodating itself to the presence of foreign bodies, is strikingly illustrated in the remarkable instances recorded by Borelli, Fournier, Harrison, and others, in which the most curious substances, as pieces of wood and iron, nails, forks, spoons, knives, buckles, compasses, door-hinges, and pieces of coin were swallowed, sometimes in large numbers, and in rapid succession, with very little immediate suffering, although they all ultimately proved fatal. A case is mentioned by Crollius of a man who lived many years in great comfort after having swallowed forty-six pebbles, weighing altogether nearly three pounds, the smallest being about the size of a pigeon's egg."

Gross also says that "when the foreign bodies are retained and cause trouble, extrusion must be effected with the knife." He quotes the case of the "man in Iowa, who, in performing some tricks of legerdemain, allowed a bar of lead ten inches long by upward of six lines in diameter, and weighing one pound, to fall into the stomach," and states that Dr. Bell, Davenport, Ia., removed the bar by an abdominal incision, with recovery of patient in two weeks. He also instances three or four of the cases in the following tables; but no word of any case of an "aggregation of hair and string."

"Holmes's Surgery," edited by Packard, gives the fullest history and description of these cases to which I have had access since the termination of our case a week ago. He quotes from the thirty-fifth volume "Medico-Chirurgical Transactions," p. 65, a case in which the patient, a woman, suffered from subjective symptoms of abdominal tumor from 1842 to 1850, and, dying, was found to have in the stomach an aggregation of nine ounces of pins, with another aggregation of a pound in the duodenum.

Also a case which he saw for Dr. Blakely Brown, in which, at the autopsy, "on opening the stomach a large mass of hair and string, matted compactly together, was found occupying the greater portion of the cavity, and moulded to the shape of the stomach; a narrowed piece projecting into the pyloric end. The hairs were long and black, and were matted together with pieces of string and particles of food. The mass measured, when dry, six inches in length, three and three-fourths in depth, and two and one-half across, but was much larger when first removed from the body. Another mass occupied the lower portion of the duodenum and the commencement of the jejunum. This portion of the bowel was considerably dilated. This second mass consisted of a smaller quantity of hair than that removed from the stomach, but of a larger proportion of string. The mass was fourteen inches in length, two and a half in depth, and two and a fourth broad in its thickest part. The specimens are contained in the Museum of St. George's Hospital.

Also the case of a man, aged twenty-two, an insane epileptic, in whose stomach, post mortem, was found a mass four pounds in weight, made up of cocoanut fibre, with bits of string, etc.

Both of these cases died without correct diagnosis of the tumor—and of ulcer of the stomach.

These cases he follows with that of Mr. Poland's remarkable lunatic, of whom he says: "On laying open the stomach and duodenum, 'a mass of iron spoon-handles and nails and other articles were seen closely packed together.' There were thirty-one entire spoon handles about five inches long, four half handles, nine nails, half an iron heel of a shoe, one screw, four pebbles, and one button; the weight of the whole mass was two pounds eight ounces. An entire spoon handle was found in the duodenum, with the flattened extremity toward the pylorus, opposite the perforation."

But "of all the remarkable instances on record of a large number of foreign bodies being swallowed intentionally, there is none to equal in interest one recorded by Dr. Marcet. In this instance a sailor swallowed, at different times, a number of clasp-knives, some thirty-seven in all. Some of these he passed whole, per anum, at intervals; subsequently he passed some fragments, and once he vomited a knife handle. A short time before his death a portion of one was felt fixed across the rectum, but gave so much pain on examination that it could not be extracted. He lived ten years after having swallowed the first knife. On examination, after death, one blade was found fixed across the rectum, with one extremity projecting into the muscular parietes of the pelvis. A back-spring of the knife had transfixed the descending colon opposite the left kidney, and projected into the peritoneal cavity; the spring was four and a half inches long. In the stomach were between thirty and forty fragments of knives." In conclusion he says, regarding treatment: "It is still a question open to discussion, and rather to be decided by future experience, how far we may be justified in opening the stomach for the removal of a foreign mass. It must be borne in mind that most of the cases in which a foreign body is retained in the stomach terminate fatally; that life in such cases is limited to a very few years, or perhaps months. The operation of opening the stomach is, on the other hand, a very serious one, perhaps the most serious the surgeon can undertake; but still the cases in which we may contemplate the operation are so hopeless without surgical interference, that the author is rather inclined to recommend

the operation in such cases as might be considered inevitably fatal if left to themselves."

In editing the work Dr. Packard adds that "Dr. Pooley, of New York, has reported ten recoveries out of eleven gastrotomies for removal of foreign bodies in the stomach." He, however, gives no account of Dr. Pooley's cases, nor tells where his report may be found. In my search during the preparation of this article I have been able to find eleven apparently authentic cases, beginning with that of Florian Mathis, in 1602; in ten of which recovery is reported as having taken place, and in one the result is not stated.

I opine that these eleven cases are the ones reported by Dr. Pooley.

In the last two cases, in which the object was "a mass of hair and string," we have no record of whether Schönborn diagnosed his case correctly before operating; but in Thornton's case he had the confession of his patient as to her habit of swallowing foreign matter to guide him in diagnosis, and so was prepared to find what he did.

In not one of the cases dying with a "mass of hair and string" do we find recorded that the nature of the "tumor" was suspected before death, except in the case reported by me to-day; and in this case the diagnosis availed nothing for the patient, since it was not accepted.

In the masses found post mortem it is of interest to note also that most of them have grown by accretion, that the habit was not confessed, and in the case of lunatics especially, no reliable information could be had, as their instincts lead them to conceal, in greater or less degree, unnatural habits. The physician has had to be guided to his conclusions by physical examination largely, by such subjective symptoms as he can elicit, and by circumstantial evidence, any or all of which may mislead him.

In looking over the statistics we are struck with a peculiarity in sex in the character of the articles swallowed. Of the 23 cases embodied in the two tables 8 were males, 10 were females, and 5 sex not stated. Of the males on whom gastrotomy was performed 2 had swallowed knives; 1 a tea-spoon and 1 a bar of lead; of the post-mortem findings the masses were made up, 1 of thirty-one spoon handles, etc.; 1 of the remains of 37 clasp-knives; 1 a mass of cocoa-nut fibre, and 1 the nature not stated. Not a hair or a string recorded among the whole lot.

Of the female subjects of gastrotomy 1 had swallowed a knife, and 1 a silver fork; of the post-mortem findings there are 1 mass of twenty-five ounces of pins, and 7 masses of hair and string!

Of the cases in which the sex is not stated, the gastrotomy was for removal of knife in one case (male?) for removal of mass of hair and string in two cases (female?) and in the remaining one the character is not given.

Of the post-mortem cases it is interesting to note the mental status of the subjects. Of the males one is described as an epileptic and maniacal; the second as a lunatic; the third, the sailor who went about gorging himself on a diet of clasp-knives, may be fairly assumed to have been of feeble mind; while as to the fourth, since we have no knowledge of what he was or what he swallowed, we must give him the benefit of the doubt.

Of the females one—my case—was maniacal; one is described as "childish for her age," and a third is known to have been of a low order of mental development. Of the mental status of the others we know nothing.

In the cases examined post mortem the mode of death was singularly uniform. Nine of the twelve cases are reported as having been found to have had ulceration of the stomach or duodenum; in three cases the condition is not stated, but the clinical report would indicate ulceration. The age of the patients is given in eleven of the twelve post-mortem cases. They are variously—thirteen, sixteen, eighteen, eighteen, eighteen, twenty, twenty-one, twenty-two, twenty-three, thirty, and thirty-one years.

This point is valuable as a diagnostic aid in differentiating a foreign mass from cancer of the stomach, since the victims of the latter disease are, as a rule, much older.

I offer this report of our patient's case, with such facts regarding other cases as I have been able to glean from a large mass of medical and surgical writings, in hope that it may sometime, somewhere, aid some puzzled physician to a clearer diagnosis of his patient's trouble, and prompt him to give that surgical aid without which his patient must inevitably "go over to the majority."

Progress of Medical Science.

Useless or Dangerous Medication in Angina Pectoris.—Dr. Huchard recalls the fact that for more than ten years he has employed the iodides in from fifteen to forty-five grains for a daily dose, and continued for several years, the attacks being relieved by nitrite of amyl or nitroglycerin. Among the useless or dangerous medications he would cite: 1. Cardiac tonics. The anginas are almost always of arterio-sclerotic origin, where the pulse-tension is already high, therefore digitalis and ergot are contra-indicated, while sparteine and convallaria are useless. Caffeine and strophanthus may, in some cases, produce favorable results. 2. Belladonna and bicarbonate of soda he regards as not only useless but harmful; they are useless because the bicarbonate of soda has no influence upon the atheromato-sclerotic processes, and they can be harmful because the belladonna excites the cerebral centre of the pneumogastric and the intra-cardiac regulatory apparatus and produces a contraction of the arteries; in toxic doses only does atropine give rise to the opposite phenomena. 3. Electricity, untrustworthy or dangerous, is almost always contra-indicated, and should only be used in those cases when there is threatening syncope, then cutaneous electrization (faradization) of the præcordial region. It is not to be recommended, because it can instantaneously stop the heart contraction, and it avails naught against the pain which it may even provoke. The constant current, far from being subject to the same dangers, has produced some good results, but the cases are insufficient to deduce therefrom the indications of a special medication. The faradic currents may be harmful, the constant are usually useless. 4. Cocaine, inhalations of oxygen. The former is dangerous, in that it produces vaso-constriction and cerebral ischæmia, thus predisposing to syncope: the inhalations of oxygen are useless, and it is readily seen that they cannot act quickly enough to suppress an attack. 5. Antipyrine, as well as similar drugs, as phenacetine and exalgine, have no favorable action upon the circulation, and if it be true that they determine a dilatation of the cutaneous vessels and a contraction of the central arteries, they will be absolutely contra-indicated in the treatment of angina pectoris. 6. Bromide of potassium: its efficacy has been exaggerated in angina due to the condition of the coronary arteries, when a daily dosage of sixty grains has not been exceeded. Larger doses may rapidly produce a slowing, with weakening of the cardiac action, contraction of the smaller vessels, elevation of the blood-pressure, and, in his experience, are without the good results claimed by others, especial objection being made to the association of the three bromides. 7. Chloral, paraldehyde, sulphonal, urethane. As an hypnotic and anæsthetic, chloral can be used. It determines not only a slowing but a real enfeeblement of the cardiac contractions: in large doses it is a cardiac poison, and can stop the heart in diastole, which forbids its use in degeneration or debility of the heart. It should not be ordered in massive doses, fifteen to thirty grains being ordinarily sufficient. Paraldehyde has been used without certain result, the causes being inconstancy of its action, unfavorable properties as regards respiration and the composition of the blood. Sulphonal acts very slowly; even if is harmless, the attack will be ended before the remedy takes effect. Urethane presents the same objection, with the additional one of uncertainty of

its action. 8. Salts of potash. One recognizes their unfavorable action upon the cardiac muscle, and, besides, if the kidneys act unfavorably (and renal insufficiency is frequently met with in those suffering from arterial sclerosis), they incompletely eliminate all poisons coming from without or formed in the organism. 9. Blood-letting is slow in its results, and may prevent, to a certain extent, the attack, but is incapable of curing it. General blood-letting favors syncope, and for this reason should be absolutely condemned. 10. Chloroform inhalations are to be considered when nitrite of amyl or morphine injections have completely failed. Then the inhalations should be short, interrupted by free inspiration of air, with finger on the pulse and watching the face of the patient. 11. Various means, as inhalations of ether, ingestion of ice, immersion of left arm in hot water, are all uncertain, are not applicable, and do not succeed, save in the pseudo-anginas. For his own treatment, stated at the commencement of this paper, it can be said that it combats the pain, it is directed against the arterial sclerosis the development of which prepares for the degeneration of the cardiac muscle, against the lesion of the coronary arteries, and especially against the cardiac ischæmia which constitutes the principal and only danger of this formidable combination.—*American Journal of Medical Sciences.*

Cholera Treated by Infusion.—Samule's method, as summarized by Kutner, is as follows: 1. *The time.*—Immediately upon the failure of opium or tannic acid, enemata to control the loss of serum, or when the radial pulse becomes anomalous, subcutaneous injections should be used. 2. *The point of injection.*—The infraclavicular fossa should be chosen, and should be used alternately. If absorption from this point ceases, the supraclavicular fossa must be chosen. 3. The infusion is used continually during the stage of asphyxia and in the typhoid stage. He injects first two ounces of the fluid, waits until this is absorbed and then injects two drachms more, and continues in this manner until the pulse is re-established. If a swelling forms at the site of injection, he waits until the fluid is absorbed or selects another point. If the pulse is present this is repeated every five minutes. If it is entirely full it is repeated every half hour. Usually, eight to ten quarts are used in a single case. 4. The fluid is made by adding one drachm of pure salt to one quart of distilled water. The temperature must be between 102° and 104° F. 5. *Instruments and technique.*—Over the head of the bed should be placed an Esmarch's irrigator with tube and stop-cock, or Collin's transfusion apparatus may be used. This consists of a funnel of about four ounces capacity, a pump, a chamber from which the fluid is distributed, an elastic tube, trocar, and cannula. With a fine trocar an opening is made in the infraclavicular fossa, the stile is withdrawn and the cannula allowed to remain in place. The gum tube is now attached to the cannula, the stop-cock opened and the fluid allowed to flow. If the liquid is not absorbed with the aid of massage, then a second trocar and cannula are inserted in the other infraclavicular space and injection begun there. The convalescence of patients must be carefully watched; they are apt to attempt to overtax their strength. Scarcely any food must be allowed at first. The result of such treatment is surprising. The sooner the operation is performed the better the results. First the pulse returns, usually in the first half hour; then the cold, staring eyes assume a natural appearance; the painful breathing becomes quiet; the face muscles lose their rigidity; the skin becomes warm; a slight sweat appears finally, and usually, not before the eighteenth hour after the operation is begun, the secretion of the urine is re-established. During reaction diarrhœa of fetid stools occurs; this, however, is a sign of convalescence.—*University Medical Magazine.*

Cæsarean Section in Placenta Prævia.—Dr. Ford formulates the following conclusions: 1. The dangers of placenta prævia, as well to the mother as to the child, are due to the development of the placenta upon the lower uterine segment, and to the canalization of this segment during labor. 2. While the first of these conditions cannot be avoided, the second should not be permitted in placenta prævia totalis or partialis. Delivery should be by Cæsarean section. 3. In placenta prævia marginalis, if the circumstances were favorable, the os easily dilatable, the condition of the mother and child good, the head presenting or capable of being steadily brought to engage, and the hemorrhage arrested or moderate, it would be well to follow the method of intra-uterine and vaginal tamponade, and deliver by forceps if the child should be in danger. But if the os were rigid, the hemorrhage profuse, the presentation lateral, the cord prolapsed and not reducible, or the fœtus evidently suffering, immediate recourse to Cæsarean section should be had. 4. The Cæsarean section should be performed as soon as the diagnosis is established and the condition of the mother permits, to the exclusion of all other methods, as an elective and primary operation, in all cases of placenta prævia totalis and partialis, and as soon as the conditions warranting it, in placenta prævia marginalis, have been satisfactorily determined. 5. In the two graver forms of placenta prævia the Cæsarean section should be practised as a prophylactic measure, in place of any attempt to deliver by the natural passages, after the first hemorrhage. 6. In cases where hemorrhage is late or sets in only as labor begins, and where, consequently, the placenta is most probably attached laterally, it is advisable, until this entire subject has been practically studied, to deliver per vaginam as a rule. If, therefore, the cervix be easily dilatable, and the hemorrhage moderate, we may proceed as suggested in the more hopeful cases of marginal implantation. But even here an undilated os associated with severe hemorrhages would constitute a very serious condition. If the rigidity were due to fibrosis, it should be abated by multiple incisions; if to carcinoma, the radical Cæsarean section would be indicated. If the cord were prolapsed, and after reposition still descended, the os being partly dilated and not dilatable, dangerous hemorrhage continuing meanwhile, the Cæsarean section would be unquestionably indicated for the safety of both mother and child.—*American Gynecological Journal.*

The Operative Treatment of Old Luxations of the Elbow-joint.—Dr. Ssokolow, in speaking of the treatment of these cases, says (*American Journal of the Medical Sciences*) it is better by forcible manipulation under anæsthetics, even with the rupturing or cutting of the triceps tendon, to secure an angle of motion of twenty to twenty-five degrees without operation, than to subject the patient to an operation which will deprive him of the use of his arm for four or five months, and he quotes Ollier as saying that "the section of all structures holding the joint in an abnormal position and the return of the articular surfaces to their normal position is far preferable, when possible, to a resection." In operating, he believes there should be no fixed line of incision, but that such incisions should be made as will give perfect access to the joint. He objects to the Langenbeck incision, because of the difficulty experienced in closing the wound when the joint is flexed. He himself prefers to open the joint posteriorly, chiselling away the attachment of the triceps tendon and replacing it after the "toilet" of the joint. In the four cases he reports there was no great difficulty in replacing the joints after the surrounding connective tissue and inflammatory growths have been removed, but it was necessary, on account of the displacement produced by the contracted muscles and tissues, in some cases to hold the articular surfaces in position by a temporary suture, which was easily removed afterward by scissors passed down the ends of the suture, which had been brought out through the wound. The difficulty in motion found after operation was removed by forced movements under an anæsthetic, and by passive motion persistently carried on by the patient.

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"THE LANCET" REPORT OF WATER-SUPPLY OF CHICAGO.

WE have refrained from commenting upon the report of *The Lancet* Special Commission of Inquiry concerning the water-supply of Chicago, cabled abstracts of which were published about two weeks ago in the daily papers, until the number of the journal containing the report was at hand. We did so because the summary transmitted by cable was so brief that it seemed unfair alike to *The Lancet* and to Chicago to attempt to draw any conclusions from it. The result justifies our prudence, for the full report, which was published in the issue for April 8th, presents the matter in a very different light than did the short reports referred to.

There is in the very first paragraph a curious little inaccuracy of statement, unimportant in itself and hardly deserving of mention except as it furnishes a striking instance of the proverbial British hebetudinosity in regard to matters geographical, especially to those in this country. In describing the outlets for Chicago's sewage matters the writer says that the Chicago River, which serves as a main sewer to the city, flows naturally into the lake, but in order that its burden of sewage may not be all discharged there, the water is pumped from a station on the southern branch of the river "into a canal which carries it far south into the Missouri, and eventually into the Mississippi River." This would indeed be a stupendous engineering feat, worthy of Chicago herself, for the nearest point of the Missouri is some two hundred and fifty miles distant. It would be very much as if a canal were built to carry the sewage of London to a point midway between Morecambe Bay and Solway Firth in the Irish Sea, or to the North Sea at Tynemouth. This is, however, a matter of no importance in relation to the main object of the report, and need cause no suspicion concerning the accuracy of the statements made by the Commission. We see no reason, indeed, to find fault with the methods followed, as far as the investigation went, or to impugn the accuracy of the analyses, though we shall show that the conclusions drawn from the result of the examination are unsatisfactory, if not misleading.

The first step taken in the inquiry was to obtain the fullest possible information concerning the system of drainage and water-supply, a task which was greatly facilitated by the courtesy of the city authorities and by their readiness to answer all the inquiries of the Commission. The chief sources from which this information was drawn were the Mayor's messages for the years 1890 and 1891, and an official report of the drainage system and water-supply of the city which the Mayor caused to be especially prepared for the purpose. At the same time that these reports were being collected and arranged in the form of a connected account by a member of the editorial staff of the journal, an agent was obtaining samples of water from various points in the river and in the lake. These samples were very carefully collected in bottles which had been sterilized and sealed in London, and which were returned filled to the office of *The Lancet*, where the contained water was analyzed. The chemical analysis was conducted by Mr. William Crookes, F.R.S., and *The Lancet's* analyst, working independently, and the agreement between the two was so remarkably close that no question can possibly be raised as to the accuracy of the results.

The samples of water obtained from the Chicago River were appalling in their nastiness. With the exception of two samples taken, one from the mouth of the river, and the other from a point on the north branch just below Fullerton Avenue, which practically consist of lake water, "the whole of the river samples exhibit a composition which in point of impurity vastly exceeds the limits in regard to liquids inadmissible into any stream laid down by the Rivers Pollution Commissioners. The extent of animal pollution in Group I. is appalling. It is of the worst kind, animal refuse being indiscriminately mixed with common sewage. The pollution begins at the very mouth of the river, and increases in intensity until a maximum is reached in the vicinity of the stockyards, not far from the Southern Branch Pumping Station, where the filthy conditions are such as to defy description. A glance at the temperature column of Table I. will show that the temperature of the water varied from 33° F. at the mouth to 44° F. at the stockyards, while the air temperature was in no case higher than 24° F. It is safe to conclude, therefore, that the condition of the river in summer must be still more abominable. The Chicago River at these points is even worse than crude sewage, and it is not surprising that the foul emanations and smells arising from the putrefaction of the animal offal and excreta which are evidently discharged into it in the raw state are described as vile, offensive, and nauseating. Whether these smells sensibly affect the health of the neighborhood is a question of importance to decide: the probability is that they do. No one will deny, however, that the existence of nauseating smells in the air is, in the interest of public health, very undesirable, and the inhalation of such offensive air, especially in times when epidemics are prevalent, should be avoided. It is reasonable to suppose further that air so contaminated is also germ-laden."

Ordinarily, of course, comparatively little of this filth is poured into the lake, for by means of the pumping arrangements the current of the river is made to flow backward from the lake, and the noxious material is thus turned in the direction of St. Louis. But during heavy rains it is impossible to maintain this artificial current, and the river then follows its natural course and empties itself into the lake midway between two of the chief intakes for drinking-water. "In another way, however, the river is a source of much more serious contamination to the lake. Its current being so slow as it is, and its

water being surcharged with sewage matter in suspension, there is naturally a considerable deposit of solid matter in its channel, which has to be kept clear by constant dredging. The sludge taken from the river bed is deposited in the lake, five miles from the shore, and gives rise, of course, to serious pollution of the lake water in the vicinity of the dumping-ground."

The results of the examination of the lake water were much more reassuring, though it must be remembered that the samples were secured in midwinter when the temperature of the water was very near the freezing-point, and it would not be safe to assume that the water is as pure at all seasons of the year as it seemed, from a mere chemical analysis, to be at the time of this investigation. In spite of the dumping into the lake of sludge dredged up from the bed of the river, the Commission found no distinct evidence furnished by chemical analysis that the lake is seriously polluted. Indeed, the samples taken from the intake points were such as to leave little to be desired, and compared very favorably with the London water-supply. The report says that "the results of chemical analysis, therefore, lead us to the conclusion that the clear or filtered lake water is comparatively pure. It is of excellent quality and well adapted for both dietetic and other ordinary purposes. In respect of organic purity, the water of Lake Michigan contrasts very favorably with the water supplied to London. This is strikingly illustrated in Table V., which contains the average analysis of two waters of the London Supply (one river-derived, the other from deep wells) placed side by side with the analysis made in *The Lancet* laboratory of a sample of Lake Michigan water obtained at the intake marked 10 on the map. Thus, in respect of color, total solid matter, hardness, chlorine, and oxygen required to oxidize organic matter, Lake Michigan water is seen to be even superior to the choicest of London's supply. There is, however, one important difference which cannot be overlooked, and that is that in all the samples of lake water there existed sedimental matter. The presence of water fleas also was common to the lake samples, with the exception of one. . . . In view of the excellent character, so far as chemical analysis goes, of the water of Lake Michigan, which nature has placed, so to speak, at the very door of the city, it is simply suicidal to run the risk that is now being run of seriously polluting so unlimited and pure a supply of water by the ugly dumping process, which consists in throwing Chicago's very worst refuse into its midst. That there are other more rational, more wholesome and more effectual means by which it could be disposed of there can be little doubt. Indeed, the sewage and refuse of Chicago need never be discharged into the river in the raw and crude state in which it is evidently thrown into it now."

The water as it runs from the faucets in the city was found to be good on the whole, though less unobjectionable than that taken from the lake. "Not a single sample of ordinary supply or lake-derived water was entirely free from sediment, and the sediment in the majority of instances was found to consist of vegetable *debris* with numerous organisms, chiefly of the pond-water kind.

"In sample No. 33, which represents the water pumped by the North Side station supplied to the North Side residents, dead water-fleas were found floating in the liquid. In fact, in respect of suspended matter or deposit the water supplied in the mains is, as was predicted, quite as unsatisfactory as the water taken from the lake. From another point of view indeed the samples are even more unsatisfactory. Take the measurement of color, for instance. While the samples taken from the lake exhibit a remarkable freedom from brown color, the highest being eight degrees and the other two being only four degrees, the color of water taken from the mains varied from nine to twenty-two degrees of brown and in one instance (No. 33 again) it was above the scale. The increase of brown tint is probably due to the waters having been in contact with the sediment which not improbably accumulates from time to time in the mains. Iron, again, would impart distinctive color. We are therefore provoked to repeat our observations in regard to the necessity of filtration. The water supplied to Chicago from Lake Michigan is chemically satisfactory in all respects but one, it contains suspended matter. But with proper and efficient filtration there is nothing, so far as its chemistry goes, to suggest that the water supplied to the city is not well suited for all domestic and dietetic purposes. The residents of Chicago are evidently aware of the desirability of filtration, as it will be observed on inspection of the table that two of the samples had been filtered through Pasteur filters."

We must not omit, however, to mention one discovery made by *The Lancet* Commissioners which seems to have caused them great uneasiness and distress, and to which they return again and again. Indeed, the possibility of pollution from the south fork of the Chicago River during freshets seems to sink into insignificance beside it. The specimens of water forwarded to London included two samples of filtered lake water. "These samples should have been beyond reproach. Both had been treated by the Pasteur filter, and yet both were found to contain suspended matter in great abundance, so that neither could be trusted to be free from dangerous impurities. The explanation of this seeming anomaly is perfectly simple. The filtered water had in both cases been cooled by the admixture of polluted ice. No words are necessary to prove that this is a foolish and most mischievous practice. It manifestly renders the filtration wholly futile." The Commissioners were informed that this custom "is common, even to the point of being almost universal, throughout the United States," and we must admit that they were correctly informed. That it is a dangerous practice we think will hardly be disputed, but that it will be changed in the brief period that yet remains before the opening of the World's Fair is more than the most sanguine can hope for.

The general conclusion arrived at by the Commission as a result of their inquiry, is that "the water supplied to Chicago from Lake Michigan is of good quality throughout, and provided that it be efficiently filtered and boiled no chemical objection to its use as a potable water on the score of organic impurity can be raised. That it is liable to very serious pollution so long as the vilest refuse of the city is thrown into the lake has already been pointed out, but there is no evidence to be gleaned from the results of chemical analysis that this, up to the present time, has actually been a source of mischief to the water. There is not sufficient information for considering accurately the effects upon health, though the high death rate of the city from typhoid fever needs inquiry. In regard to the

water-supplies of Chicago from other sources—namely, two from Waukesha and one from the artesian well of Washington Heights—they are less well adapted for ordinary washing and manufacturing purposes, but in respect of organic purity they are equal, and probably far superior in character, to the ordinary supply. The waters derived from the pure sources of a spring or deep well may of course be more confidently recommended for drinking purposes, especially when it is known that a serious risk of the pollution of Lake Michigan exists."

This, in brief, is the report of *The Lancet* commission on the water-supply of Chicago, and while we can but admire the spirit of enterprise which has inspired our esteemed contemporary to undertake the inquiry, we are forced to the conclusion that the results are in no way commensurate with the labor and expense of the investigation. The report gives us little information of practical importance that was not known before, and its conclusions, based as they are solely on the results of a chemical analysis of various samples of sewage and of drinking-water, are misleading and liable to give a false sense of security to those exposed to a very real danger. It tells us merely that there was but little sewage pollution of the drinking-water of the city in the month of December, 1892, but it ignores entirely the all-important question of bacterial contamination. Chemical examinations of a water, while useful in a general way as an indication of the existence or non-existence of organic pollution, is wholly insufficient as a basis upon which to ground an opinion of its safety as a drinking-water. Even before bacteriology had become a science, the fallacy of chemical tests was recognized. Dr. Buchanan, in a "Report of the Medical Officer of the Local Government Board," made in 1882, wrote: "While we must ever be on the watch for the indications that chemistry affords of contaminating matters gaining access to our waters, we must (at any rate until other methods of recognition are discovered) go beyond the laboratory for evidence of any drinking-water being free from dangerous organic pollution." An elaborate series of experiments conducted by Dr. Cory, at the instance of the Local Government Board, have shown conclusively that chemical analysis often fails to give any indication of the presence of an amount of specifically polluting matter which is far in excess of what has proved disastrous in many epidemics of typhoid fever.

The Lancet very truly says that the question of absolute freedom from disease-germs "can only be positively answered by bacteriological examination, and by the study of the effects of the water on those who drink it. No such bacteriological examination has been practicable in the present case, because of the length of time necessarily consumed in transporting the specimens from Chicago to London. The period so occupied would have sufficed for the occurrence of most important changes in the conditions of bacterial life upon which such an examination must proceed. The value of chemical analysis is chiefly due to its affording a very substantial ground of inference. Typhoid fever, cholera, and diarrhœa are the principal disorders which are disseminated by sewage-contaminated water, and in practice water receives such germs from sewage only."

But "the effects of the water on those who drink it" in Chicago have been repeatedly shown to be most disastrous. The MEDICAL RECORD, in common with many other journals, called attention over a year ago to the specific pollution of Chicago water, as evidenced by the enormous death-rate from typhoid fever in that city, and *The Lancet* in this report says that "the mortality statistics show that Chicago suffered from typhoid fever nearly eight times as much as London, in 1890, and nearly twelve times as much as London in 1891." The commissioners, to whose pagophobia we have already alluded, seem to attribute this solely to ice contamination, and they make it a text for another earnest warning against the drinking of any water which has been cooled in contact with ice. But if Chicago ice is taken from the lake, it is not reasonable to suppose that it is any less pure than the water from the same source. Prudden has shown that the old idea of the purification of water by freezing is incorrect, but we have yet to learn that ice formed in pure and wholesome water can generate within itself specific micro-organisms which do not exist in the water before congelation.

It is to be regretted that a journal like *The Lancet* should appear to put the seal of its approbation on a water of which it has made a chemical examination only. It is true, the commissioners recommend that the water be boiled and filtered before being used, and that no ice be melted in it. But a water that cannot be rendered fit for household purposes by boiling and filtering, must be foul, indeed, and the insistance of the commissioners that this be done with the Chicago water is in fact a condemnation. Yet the general impression which will be created by the published results of this investigation is that the water is good and fit for human consumption, and the warning against its use in the raw state will soon be forgotten by most of the readers of the report. A feeling of security will be aroused where no security exists, and the danger to visitors, in consequence, likely to be greatly increased. If forewarned is forearmed, the converse is equally true, and people who are made to believe that the Chicago water is at times fairly good, will never take the trouble to see that every drop they drink has been previously boiled, especially if such treatment renders it insipid to the taste. It is a great pity, and a crying shame, that a community with an unlimited supply of ideally perfect water within reach should go to the trouble to pollute this water by dumping the settlings of its sewers within two miles of the intakes.

THE BUCHANAN TRIAL.

THE Buchanan trial, which has now been going on for several weeks in this city, has excited much public interest, and has in particular called attention again to the subject of expert chemical and medical testimony.

The history of the alleged crime is a peculiar one. The defendant, Mr. Robert Buchanan, is down in the directory of the New York County Medical Society as L.R.C.P., and L.R.C.S. Edinburgh, 1883. He has not, therefore, strictly a right to the title of doctor. Some time before the alleged murder he married a woman older than himself, who was keeping a brothel in a neighboring city. This woman made a will in his favor before marrying him. After living together for a while, Mrs. Buchanan was taken ill and in a few days died. The attending physician, who was not Mr. Buchanan, gave as

a cause of death cerebral apoplexy. No post-mortem was made. The body was embalmed with a fluid containing zinc and arsenic. About forty days later the body was exhumed and a post-mortem made. No evidence of cerebral hemorrhage could be found at the time, nor of other cause of death. The viscera were examined chemically, and traces of morphine and "some other narcotic poison" are said to have been found.

The prosecution has been trying to prove with the help of experts that the woman died from a mixture of morphine and atropine, administered by Mr. Buchanan with criminal intent. They present evidences of motive, and were able to get distinguished experts to swear that the body forty days after death showed no sign of organic disease. Other experts swore that the symptoms with which the patient died were those of morphine and some other poisons. The defence has been made specially interesting by reason of the fact that one of the lawyers is a qualified veterinarian and physician, and though evidently not a very learned man, has the technical vocabulary well in hand.

One of the interesting facts so far developed is the very extraordinary way in which the brain and other organs of murdered persons refrain from decomposing. In all ordinary cases a brain is useless for scientific purposes after two or three days, but the Buchanan brain was found fit for microscopic study after forty days!

The medical testimony developed some valuable experiences in combined opium and atropine poisoning; and the chemical testimony has brought the ptomaïnes into evidence again.

COMPARATIVE THERAPEUTICS.

Some of the homœopathic physicians of this city have obtained permission of the Board of Health to go through the records of vital statistics, in order to see the ratio of mortality under homœopathic treatment as compared with that under regular treatment. These figures are, we believe, to be used in connection with a homœopathic exhibit at the World's Fair.

Concerning this we cannot do better than quote an editorial comment from *The Sun*, which says:

"We may as well notify them that, if such an investigation is to command public respect, it must be prosecuted with the assent, and under the supervision, of representatives of all the schools of medical practice. If these representatives of the various systems of medicine, co operating in good faith, carrying on their researches in a scientific spirit, and seeking the truth regardless of consequences, should be able to make and sign a report that the practitioners of any one school are more successful in the treatment of contagious maladies than those of the other school or schools, such a report would assuredly have a powerful influence upon the whole medical faculty, as well as upon the community at large."

This is precisely true. If it can be shown positively and logically that the homœopaths or eclectics have any way of treating, we will say, pneumonia, which lessens its mortality, we shall be delighted to learn it, to advocate it, and to adopt it. This is the essence of what is called rational medicine. We want to know the best way to treat disease, and we will follow this method regardless of its source; whether this be a scientific laboratory, or the vagary of an old woman.

But it must be remembered that the study of the therapeutics of acute, self-limited diseases is extraordinarily difficult; the class of patients, the character of the epidemic, the time of year, the period at which treatment was instituted—all these are factors which have to be very carefully considered. We hardly see how their value can be estimated from a study of Board of Health records.

THE PECUNIARY VALUE OF THE KEELEY CURE.

The report that Dr. Keeley, of Dwight, Ill., has sold all rights in his gold cure to a syndicate for $10,000,000, has been contradicted, and is perhaps only issued as a kind of advertisement to help along a waning business. Nevertheless, there can be no doubt that Dr. Keeley and his assistants have made enormous sums of money out of their alleged cure. We very much doubt if in the history of the world there has ever been so great a financial return for medical treatment. Many of the vendors of patent medicines, of pills, syrups, tonics, etc., have made large fortunes, but with them it was purely a question of putting an article on the market. Dr. Keeley has got his money by the shrewd utilization of an ingenious system of medical treatment, which seems to be a mixture of mind-cure, strychnia, and atropia. The treatment is happily adapted to a condition which it is the custom of many to call a disease, but which is often periodical in its appearance, and usually dependent largely on the surroundings and self-control of the patient.

The same sort of fortune might attend a person who could successfully exploit a cure for hysteria, bad temper, or other conditions of defective control and hyper æsthetic self-consciousness. We imagine that if the water of Lourdes were put in the hands of a priestly syndicate and properly advertised, it too might be productive of great financial returns.

All such striking phenomena as the rise and development of the Keeley cure are instructive psychologically, clinically, and practically. One thing, for example, that has been taught at Dwight, Ill., is the value of personal supervision by the physician of cases of inebriety.

THE UNITED STATES AS A FIELD FOR PRACTICE.

A correspondent hailing from Yale College writes to *The Lancet*, asking what are the chances of obtaining a practice in the United States. Thereupon a "British practitioner, twenty years resident in the States," replies that America is the quack's El Dorado, and that competing with quacks is neither dignified nor remunerative. As a rule, the quack will get the better of the struggle, for he will descend to methods that an honorable and conscientious member of the profession can neither countenance nor practice.

Doubtless the new-comer will be dubbed "doctor" whatever his diploma, but the title "doctor" is a very cheap one in this country, and is applied to common farriers, patent medicine pedlers, and a host of druggists. The ratio of legitimate practitioners to the population of the States is one to five hundred, and this does not include the great number of humbugs that flood the country.

The writer also refers to the enormous amount of patent medicines sold, and to the self-doctoring and counter-prescribing habits of this land.

All of which is to some extent true, but it only presents one side of the picture. Take it all in all, the social position, personal influence, and pecuniary rewards of the physician in this country are superior to those in England. Neither does the quack get ahead of the honest man in the long run.

BICYCLING AND ITS PHYSICAL RESULTS.

Says *The Medical Press:* "Apart altogether, however, from a health point of view, nothing could exceed the inartistic attitude which is now assumed by 'wheelmen' trundling themselves about on 'safeties.' With arms outstretched and elbows ungainly projecting, with slouching shoulders and backs curved to the arc of a hoop, with heads thrown back causing the chin to assume somewhat a 'prognathous' position, suggestive of the natural facial outline of the reputed simian ancestors of man—these are the several features of the riders which attract the attention of an observant spectator at the meet of a cycling club. To say that such a spectacle is a melancholy one is by no means to exaggerate the truth. In the best sense of the word, the sight is a melancholy one, to witness the sacrifice of so much of that gracefulness which naturally belongs to the 'human form divine' by the pursuit of a pastime which in all other respects has everything to commend it."

A good many physicians now recommend "cycling." They should do it with a caution; and the manufacturers would do well if they would invent a "health bicycle" which could only be propelled by a person who sits erect.

News of the Week.

The Legislature of South Dakota has enacted a law that physicians before receiving licence from the State Board of Health to practise medicine shall be graduates of a medical school which requires at least three full courses of six months each in separate years. This law does not apply to physicians already graduated.

The Pan-American Medical Congress. Section on Diseases of Children.—The organization of this Section is complete and the work of arranging a programme is well advanced, numerous valuable papers having already been promised. Physicians interested in diseases of children are cordially invited to attend these meetings. Any physician desiring to read a paper is requested to communicate at once with the Secretary, who will furnish all needed information. Executive President, Dr. John M. Keating, Colorado Springs, Col.; Secretaries, Dr. F. M. Crandall (English-speaking), No. 113 W. 95th Street, New York, N. Y.; Dr. Damaso Lainé (Spanish speaking), Media, Pa.

The Late Dr. Ceccarelli, physician to the Pope, died, it was said, of peritonitis. It was asserted, however, after his death that he had been "removed" by poison. Thereupon his body was exhumed and examined, the result being to show that his death was really as stated in the certificate.

The International Medical Congress.—It is announced that members or "Congressists" intending to be present at the International Congress will receive "special counters," entitling them and their wives and daughters to a reduction in fare to Rome. Visitors from England will be allowed to go and return for a single fare,

American Climatological Association.—The Tenth Annual Meeting of the Association will be held in Philadelphia, Thursday, Friday, and Saturday, May 25th, 26th, and 27th. Members having papers to present will please communicate with the President, Dr. R. G. Curtin, 22 S. Eighteenth Street, Philadelphia, or the Secretary, Dr. J. B. Walker, 1617 Green Street, Philadelphia, at as early a day as possible.

Paris Streets Named After Physicians.—The Municipal Council have voted to name certain streets after Charles Robin, Vulpian, and Wurtz. New York has a Mott Street.

Very Slow.—Dr. James Jackson has amused himself with calculations of the rapidity with which living things grow. The nails, he finds, are most behind in the race. A nail grows at the rate of 0.000.000.002 millimetres per second.

Dr. William O'Gorman, formerly of Newark, N. J., died at Council Bluffs on April 14th, aged thirty-two years. He was a son of the late Dr. William O'Gorman, of Newark, N. J., and began the practice of medicine in that city. He leaves a widow and two children.

Dr. George C. Smith, of Kingston, N. Y., died on April 13th, aged sixty years. He was born in Salem, N. H., but for over a quarter of a century had practised medicine in Kingston. For many years he had labored to establish a free hospital in that city, and the corner-stone of the building was laid the same week in which he died.

A Portable Disinfecting Machine.—The New York City Health Department has received from Hamburg a portable disinfecting machine. The machine was used with great effect in Hamburg during the recent epidemic. It is drawn by horses, and can be taken anywhere in the city to disinfect clothing, bedding, etc., in front of any infected house. The process used is steam fumigation. It cost the Health Department $960.

Revision of Our Public Health Laws.—The daily *Times* says: Perhaps the most important bill now pending in the Legislature is the act which is to be known as the Public Health Law, and to constitute Chapter 25 of the general laws. It is a codification and revision of all the existing laws relating to the public health, including the organization and duties of the State Board of Health, local Boards of Health, protection of water supply, quarantine, the regulation of the practice of medicine, dentistry, etc. It is one of the products of the Revision Commission, but it has undergone the scrutiny and revision of the State Board of Health and various other authorities interested in its different provisions. The existing laws have been passed at various times during a long period of years, and, like the legislation relating to other subjects which has grown up in the same way, they are more or less incongruous and confusing. This bill proposes to substitute for the whole patchwork of statutes a single harmonious act covering the entire subject. It is by no means a mere codification of the provisions of

the present laws, but is a thorough revision, containing many substantial changes and bringing legislation with reference to sanitary regulations and the protection of the public health well up to date.

A Sanitary League.—Washington is to have a new aid to hygienic enterprise in the "Sanitary League of the District of Columbia," organized recently by Dr. J. S. Billings, R. Ross Perry, Theodore W. Noyes, E. Francis Riggs, John Jay Edson, and others. The League is founded on the belief that the neglect of sanitary conditions is the source of great dangers and that many of these dangers might be prevented and much of the evil cured by intelligent, well-directed effort. The object of the League, besides securing the thoroughness of a house-to-house inspection, and improvement in disposal of sewage, is to prevent contamination of the water supplies, and to secure the removal of conditions which would become the source of great danger on the appearance of cholera.

The Miami Medical College held its annual commencement March 30th. A class of twenty-eight was graduated.

The Central College of Physicians of Indiana graduated the modest number of five at its commencement March 15th.

The Indiana Medical College graduated twenty-eight students on March 30th.

The Barnes Medical College held its first annual commencement at St. Louis, April 3d last.

The Ensworth Medical College of St. Joseph, Mo., held its commencement exercises recently. The graduating class consisted of thirty-three members.

The Chicago Woman's Medical College has graduated a class of thirty.

A Bill to Change the Present Method of Securing Medical Officers for our various State institutions was introduced into the Legislature and passed one of the houses. It is said to have been prepared for the purpose of enabling a Brooklyn politician to supply an office to a friend. The bill was fortunately killed and the present excellent civil service law continues to stand.

Suppression of Prostitution by law is to be attempted in Arkansas, a bill providing heavy penalties for the inmates of houses and for negligent police officers having been passed by the Senate.

Experiments on Nutrition.—Dr. von Noorden gave at a recent meeting of the Berlin Physiological Society an account of four experiments on nutrition, carried out under his direction on men. The first established the fact that nitrogenous waste, as in the case of diabetes, even when excess of proteid is given, can be most definitely lessened by the ingestion of large quantities of carbohydrates. Fats cannot take the place of carbohydrates in the above. The second showed that when carbohydrates are given in increasing quantities over a prolonged period to a person, in nitrogenous and calorimetric equilibrium, they lead for the most part to a storage of fat (ninety five per cent.), and to a less extent of proteid (five per cent.). The speaker expressed the opinion that this proteid is laid on the living cell as a sort of non-living reserve proteid. The third set of experiments showed that when the food of a fat person is diminished down to the requirements of a seven to ten year old child, then any increase of its proteid constituents leads to a storage of proteid, with a simultaneously considerable loss of fat. Experiments on the respiratory interchange of the persons experimented upon showed that the intake of oxygen had been reduced to a minimum, and that the respiratory quotient was 0.7. The last set of experiments, made on a gouty patient, showed that with a constant diet the ratio of intake and output of hydrogen was very variable; at one time a large amount of nitrogen being retained in the body, while at another time much more nitrogen was excreted than was given with the food.—*British Medical Journal.*

A Cancer Hospital for Vienna.—It is reported that Baron Albert Rothschild, on the first anniversary of the death of his wife, has given half a million florins for the establishment of a cancer hospital in Vienna. The Baroness died of cancer.

The Seventh Congress of French Surgeons held its opening meeting on Monday, April 3d, at the Paris Medical Faculty, Professor Lannelongue in the chair.

British Medical Association.—The sixty-first annual meeting of the British Medical Association will be held at Newcastle-on-Tyne, on Tuesday, Wednesday, Thursday, and Friday, August 1, 2, 3 and 4, 1893.

Winter Cholera in Russia.—Our consul at St. Petersburg reports to this Government the statistics of the cases and deaths in Russia during the winter. It appears that cholera has been general throughout the coldest weather, and has shown a very high rate of mortality.

Treatment of Syphilis.—It has been found that syphilis can be treated by the simple application of mercurial ointment. Each night the patient applies on a certain part of the body one drachm of the ointment and covers with a piece of linen; no rubbing is needed. In the morning the part is washed. Chlorate of potash gargles should be used during the treatment as by the other methods.

Military Surgeons in Classic Times.—Dr. Corlieu, writing in the *Journal d'Hygiène* on military surgery among the ancient Greeks and Romans, gives some interesting details. According to him, armies were accompanied by men who dressed wounds, reduced fractures and dislocations, and stopped hemorrhage. In the reign of Augustus, surgeons were appointed to the regular troops. The Persians were among the first to give attention to hygiene. Surgeons are mentioned by name in the accounts of the military expeditions undertaken by the Macedonian kings. At first they received no remuneration, but later they were paid out of the public treasure, or out of the money obtained from the vanquished. The author also makes mention of a mounted ambulance corps instituted in the reign of the Emperor Marius. Their duty was to carry the wounded away from the scene of battle. The first military hospital was established under Trajan.

The Memphis Hospital Medical College graduated a class of eighty-nine on March 30th.

Fortes Vixere ante Agamemnon.—Dr. C. B. Keetley, in *The Lancet*, makes the suggestion that Englishmen (and Americans too) hear too much of Harvey and Hunter.

to whose glory there are established annual orations; but they hear very little of other equally distinguished men. He proposes that the Harveian and Hunterian orators be allowed for a change to say something about Sydenham, Cooper, Bill. Pott, Willis, Gisson, and others.

A Hospital for Phthisis is about to be erected in Paris.

The Dispensary Abuse in Berlin.—The Medical Professional Union held a meeting on March 23d, and adopted the following resolution: "The medical men assembled to-day declare that the efforts at reform in the matter of the Berlin policlinics must be directed first and foremost to the keeping away of patients who are able to pay from these institutions, so far as this is compatible with the aims of medical instruction, and entrust the further conduct of the agitation to the Professional Union."

Professor Wilhelm Erb, of Heidelberg, has been called to Vienna to succeed Dr. Kahler as professor of clinical medicine there.

A Land Without Cow's Milk.—In the *Journal of the American Medical Association* (vol. xx., No. 4) Dr. Ashmead has an interesting paper on "The Absence of Cow's Milk from Japan: its Beneficial Consequences." He believes that the absence of rickets is due to the fact that the children are nursed by their mothers, and that this natural milk always remains the *plat de résistance* for the first six years of life. Artificial lactation is altogether unknown; and the author says that the Japanese mothers are the most perfect, the most successful *Almæ Maters* in the world. The author also refers to another interesting point. A Japanese woman, as by an instinct, never kisses her child on the lips, because the Japanese know that the kiss is a carrier of tuberculosis and syphilis. He also believes that "total abstinence from cold water—an inverted teetotalism—has been the salvation of Japan. Water is only drunk boiled with tea; the boiling kills the typhoid germs and the eggs of the distoma."

Honoraria.—In these days of competition and hurry for wealth the comments of the Russian medical journals on the large fee of $50,000, recently paid by the "Nabob" of Rampur to Dr. F. Freyer, who had attended him for three months for rheumatoid arthritis, may be excused. This is an award that very few will ever obtain, and need not therefore be accepted as any guide to the remuneration of the profession. The most handsome fee on record is that obtained by Dr. Dimsdale, in the year 1762, when the services of the profession were held in higher esteem than now. He was called from London to St. Petersburg to vaccinate the Empress Catherine II., for which he received £10,000 as fee, £2,000 as travelling expenses, a portrait of the Empress, the title of a Baronetcy, and "Physician to the Queen," with a life pension of £500 a year. Professor Sacharin, of Moscow, received for a consultation in the case of Tereschtschenke, a millionaire, the respectable sum of 14,000 roubles with 2,000 for the assistant, while a special train was ordered to convey the professor hither and thither.—*Medical Press.*

The Manhattan Clinical Association was organized in this city on March 10, 1893. The following officers were elected for the current year: *President*, J. P. McGowan, M.D.; *Vice-President*, Emilio Echevarria, M.D.; *Secretary and Treasurer*, William Smith Roose, M.D.

Section on Otology of the Pan-American Medical Congress.—It is hoped that this important section will be favored by papers from both the ophthalmologists and rhinologists, as well as by otologists pure and simple, and to that end an effort will be made to secure hours for the meetings of the section which will not conflict with those of either of the other sections. Communications in reference to papers should be addressed to the English-speaking Secretary, Dr. Max Thorner, 141 Garfield Place, Cincinnati, O., and suggestions as to work and the exhibition of special instruments to the Executive President, Dr. C. M. Hobby, Iowa City, Ia. The Spanish-speaking Secretary is Dr. H. McHatton, of Macon, Ga.

The International Medical Congress.—The American Committee announce that the North German Lloyd and the Hamburg-American Steamship Companies offer a reduction of twenty-five per cent. to physicians going to and coming from the Rome Congress. The French line offers the rates which are allowed French officers, that is, $63.50 for an $80 accommodation, and $91.50 for a $120 accommodation. Five other lines decline to make any satisfactory arrangements.

Quadruplets.—A young woman living near Blairstown, N. J., is reported to have given birth recently to quadruplets, two boys and two girls, all alive and apparently well. As the mother is but sixteen years old, and this is her first venture, the prospects of her having a large family seem to be good.

The Medical Society of North Carolina will hold its fortieth annual meeting at Raleigh, May 9, 10, and 11, 1893. The subject for the annual debate is "Rheumatism," the discussion on which will be opened by Dr. D. T. Tayloe, of Washington. Dr. J. W. McNeil is president, and Dr. R. D. Jewett secretary.

Reported Cholera in the Northwest.—A special dispatch to the *Tribune* says that cholera has broken out in Winnipeg. Last Thursday there arrived at that city by the Canadian Pacific Railway 256 immigrants from Europe, many of them from Southern Russia. They came by way of Montreal, in the steamship Vancouver. The disease broke out at Fort William, on the north shore of Lake Superior, and the car in which it occurred was quarantined. Four more passengers were taken ill before Winnipeg was reached, and all the passengers were at once quarantined. The immigrants were on their way to this country, intending to cross the border at Neche, N. D., where there is no health officer. They have been detained by the authorities of Winnipeg, and the Governor of North Dakota has been notified.

"**Constant Reader**" is reminded that we cannot answer anonymous communications of any kind.

Dr. Leonce Giraud died in the Mount Sinai Hospital a few days ago. He was brother to Count Réné de Giraud, of Paris, and had been a surgeon-major in the French army, serving at one time on the staff of General Boulanger. For some months previous to his death he had been a floor-walker in one of the large drygoods houses in this city.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, March 23, 1893.

H. J. BOLDT, M.D., CHAIRMAN.

The Umbilical Cord Wrapped Six Times Around the Neck.—DR. J. CLIFTON EDGAR presented a fœtus which was dead when he induced labor at the beginning of the ninth month, the woman at that time having had an elevation of temperature of one or two degrees and otherwise showing illness. When the fœtus was extracted it was found to have the cord wrapped six times around the neck, while the length of the free cord was about five inches. Intra-uterine death had evidently been comparatively recent, and due to strangulation. The length of the fœtus was nineteen inches, weight four pounds. Labor was induced by glycerine injection.

DR. JEWETT had seen wrapped around the neck not more than two or three coils; Dr. Fruitnight, four; Dr. McLean, three.

DR. MCLEAN remarked that he had found difficult engagement and delivery overcome in such cases by turning the head and body of the child around in the uterus in the reverse direction of the wrapping of the cord.

DR. EDGAR had found nine reported as the greatest number of coils around a child, but the neck was not stated, and he inferred it was around the body.

Instrument to Tighten Ligatures.—DR. AYERS presented a two-bladed instrument with long shanks and a grooved shoulder at the distal end, a spring between the handles, intended for tightening ligatures on pedicles during vaginal hysterectomy and abdominal operations where it was either impossible, because of the distance, or dangerous, to make traction by the use of the fingers. It had acted very satisfactorily in a case in which he had assisted to perform splenectomy.

The Symptoms of Pregnancy without Pregnancy.—THE CHAIRMAN related the case of a woman who came to the clinic with an abdominal tumor and all the signs of pregnancy—morning sickness, changes in the nipples, etc. The cervix was up under the symphysis, and on the right side was a tumor believed to be the retro displaced gravid uterus of about the fourth month. The patient had menstruated regularly until four months previously. The abdominal tumor was larger, reaching to above the umbilicus on the left side, and was supposed to be an ovarian cystoma. The diagnosis was, ovarian cystoma and uterine pregnancy of about the fourth month. He said the first thing he did on opening the abdomen was to cut into the bladder, which was unexpectedly found adhering to the parietal peritoneum and tumor. This wound in the bladder was closed, but the viscus was again injured in another place owing to intimate adhesions. The supposed ovarian cystoma was found to be an intra-ligamentous cystoma, which was removed, necessitating also the removal of a little of the uterine wall to which it was attached. The patient died and post mortem he removed a tumor involving the broad ligament on the other side, which he did not cut into, supposing it was an extra-uterine pregnancy, and turned it over to Dr. Freeborn for examination. He was astonished to learn that it was nothing more than a suppurating ovarian cystoma and diseased tube.

Bad Midwifery.—DR. MALCOLM MCLEAN related a case which he thought should serve as a lesson against faulty midwifery. He first saw the woman at 10 P.M. Friday, she having been in labor since 1 P.M. Thursday. The first stage continued apparently until Friday morning, and then she began to have severe pains which had lasted all day. Notwithstanding that the head did not engage in the superior strait, nothing practically was done until 4 P.M. The head was above the brim, and the doctor applied forceps, but they slipped each time. Then some attempt was made to measure the brim, and it was thought slight contraction existed; version was performed, the feet brought down rather rapidly, the large body was brought down at 6 P.M., but the two or three physicians present were unable to extract the head, and Dr. McLean arrived at 10 P.M. He found the woman in bad condition, under chloroform, the buttocks near the edge of the bed, the child's feet touching the floor, the head in the uterus almost completely separated from the body at the fourth cervical vertebra. With difficulty he put on the Tarnier forceps and extracted, and for the moral effect sewed the almost severed head on the body. Although the woman was still alive, it was likely she would die. There were injuries of the uterus, rectum, etc. Had intelligent efforts at delivery been undertaken fifteen hours earlier, he thought the result would have been very different. It was evident enormous traction had been made on the child after turning, whereas pressure upon the uterus from without and direction of the chin from within would probably have saved injury to mother and child.

Discussion on Symphyseotomy.—Dr. H. C. COE opened the discussion with a brief paper (see p. 485).

DR. CHARLES JEWETT said that symphyseotomy done on a pelvis roomy enough without it was a less serious mistake than when done on a pelvis so small that after the operation the fœtus could not be extracted. Experiments upon the cadaver and *a priori* reasoning would lead one to suppose the gain from separation of the pubes was less than it proved to be on the living subject. As to the after-results, he thought slight motion would do little harm should firm union fail to take place. As to direction of cutting, he thought little difficulty was to be encountered in engaging the knife from behind, and there was less danger of injury of the urethra and vessels than in the anterior incision.

Alcoholic Pneumonia Killed His Patient.—DR. E. P. DAVIS, of Philadelphia, present by invitation, related a case in which he performed symphyseotomy on a woman brought to the hospital after commencement of labor, although she had been seen some time before. The child was saved, but the mother died on the third day of alcoholic pneumonia, the autopsy revealing the pulmonary lesion, while there was no indication of septic infection. The symphysis was found three inches high, the average normal height being four to four and a half centimetres. This great height of the symphysis accounted for the difficulty which had been experienced in engaging the Galbiati knife. The joint was somewhat sinuous, and to meet the difficulty which this or rachitic bony union would imply, he would advise adding to the armamentarium a surgeon's chain-saw.

DR. NOBLE, of Philadelphia, present by invitation, had performed symphyseotomy on a woman who, at previous pregnancies had been subjected to either difficult forceps with injury to the child's head, to Cæsarean section, or to induced labor. Only one of her children had been born without special interference. The true conjugate was not more than three inches. The fifth and last child was a large one, and he had difficulty in extracting it even after dividing the symphysis. He cut from below and behind, as was usually done abroad. A particular advantage of this direction was less danger of soiling the wound by the lochia. It should be borne in mind that symphyseotomy was not adapted to cases of marked pelvic deformity. In dressing his patient he applied two bandages, the under one having a perineal strip so that the patient could easily be cleansed.

There May Be a "Symphyseotomy Wave."—DR. EGBERT H. GRANDIN read some notes on the subject for discussion. He referred to the ovariotomy wave as a warning against going to extremes with symphyseotomy. He would be very thankful, however, if by the place which this operation was destined to take in cases of difficult labor, it should spare the world many of its idiots, epileptics, cranks, and defective human beings. At present he thought it might be said that symphyseotomy ought not to have a mortality-rate where the operation was resorted

to before the patient had been exhausted by other means. Other things being equal, the child should be saved. Injury to the bladder and urethra was avoidable. Hemorrhage was likely to occur only when an improper incision was made, and if it should occur it could be controlled. Sepsis here, as elsewhere in surgery, meant faulty technique. He would cut from above downward and inward. He thought the Galbiati knife an awkward thing. The subpubic ligament must be separated in order to increase the diameters. Care should be taken to depress the urethra and vesical neck if one would avoid a vesico vaginal fistula. The two cases which the author then related have been referred to in a recent society discussion in the MEDICAL RECORD. The first case was subsequently complicated as follows: Grip: an enormous mammary abscess; abdomino-vesical fistula; on the eighteenth day a double crural phlebitis. Yet on the thirty-fifth day she was walking about, no lameness at present, and apparently close union, no mobility, fistula closed. The second patient now complained of a sense of waddling gait, and an examination showed slight lateral motion of the joint when walking.

Dr. Grandin repeated the motto with which he had opened his paper, *festina lente*.

DR. MALCOLM MCLEAN approved of the motto just quoted. During labor what seemed to be a deformed pelvis was often only a disproportion between the head and brim, and would be overcome by nature and skilled hands. Moulding did not consist simply in the gliding of the cranial bones over one another; even with the degree of ossification mentioned by Dr. Grandin, the head would modify its shape surprisingly. One should consider, too, not only the presentation, but also the position of the head, for when it seemed impossible for the head to enter the brim a slight change in position might render it quite easy.

DR. R. A. MURRAY made some remarks based on observation of Dr. Grandin's cases. He thought the after-effects of symphyseotomy had not been sufficiently studied. The walking was not alone to be considered.

DR. COE closed the discussion, and said the point had not been referred to that symphyseotomy was not to be considered, even in a moderately contracted pelvis, provided there were marked lateral distortion. He thought that in private practice symphyseotomy would probably be allowed where Cæsarean section would be firmly rejected. One could not predict beforehand how much the head would mould, and unfortunately he had had cases in which he had waited too long.

SECTION ON GENITO-URINARY SURGERY.

Stated Meeting, April 11, 1893.

SAMUEL ALEXANDER, M.D., CHAIRMAN.

Syphilitic Orchitis.—DR. F. TILDEN BROWN presented the patient, a man twenty-two years of age, who in 1888 had a venereal ulcer, who later contracted gonorrhœa, and in July, 1890, noticed an adenitis, and three months afterward had a general secondary eruption. A month later the right testicle began to enlarge, and a year and a half afterward it was removed, he being at the time a prisoner in Sing Sing, where they told him, he said, that the operation was necessary. Four months ago the left testicle began to enlarge, and when presented the scrotum was the size of an orange. The patient said his sexual powers were unimpaired.

When discussion was called for, DR. TAYLOR wondered why the patient did not sue the State for damages.

Rubber Cap for the Urethral Dilator.—DR. FORDYCE presented a soft rubber tube or cap to draw over the blades of the urethral dilator, to prevent mucous membrane from engaging and getting pinched between them. Being elastic, it did not interfere with opening the blades of the instrument. It was kept in stock by Ford.

Hypertrophy of the Bladder and Prostate.—DR. JAMES R. HAYDEN presented specimens in a case of hypertrophy of the walls of the bladder and of the prostate, the chief interest in the case being that the prostatic hypertrophy was such that, had it been recognized during life, it could have been successfully removed by prostatectomy.

Uro-genital Blennorrhœa in Children.—DR. HENRY KOPLIK read a paper on this subject, using the term uro-genital blennorrhœa to express vulvo-vaginitis in girls and urethritis in boys. During the past six years he had seen as many as two hundred cases of this disease in boys and girls. As the foundation for his paper and exhibitions of specimens he had taken all the cases seen by him the past six months—thirty in number. He showed under the microscope micro-organisms found in these cases, and which resembled very closely the gonococcus of Neisser, and yet were distinct from it. The paper contained a succinct account of what had been done—more especially of recent years—to differentiate the coccus of Neisser from others which resembled it, and to show its etiological relation to true gonorrhœa. As stated in his remarks closing the discussion, the studies of Wirtheim had been among the most conclusive in demonstrating the causative relation of the Neisser coccus to gonorrhœa, as he had succeeded in isolating and cultivating the coccus and had made opportunity to give rise to gonorrhœa with it by inoculation.

The author made three classes of blennorrhœa in girls. As illustrating the first class, he said the mother would bring a child and say that it cried whenever it made water, and on inspection one saw that the parts were red and angry-looking, the labia moistened with serous fluid, perhaps of yellowish tinge, but no pus. These were simple cases of uro-genital blennorrhœa due to irritation and lithiasis. The second class he called simple blennorrhœa, in which there was a purulent discharge, without true gonorrhœa, the discharge containing leucocytes, some of which indicated inflammation: it was not the desquamative process described by Epstein, but a true blennorrhœa of infectious and contagious nature. The pus contained leucocytes, diplococci, bacilli, simple cocci, but the arrangement of these micro-organisms was not characteristic of gonorrhœal cases. The third class, a pretty large one, included cases of true gonorrhœa.

He had examined the vagina in these different cases by the little wire urethral speculum of Tuttle aided by a head-mirror. In this way one could see up into the fornix and the mouth of the cervix. In simple cases of vaginitis there were no erosions of the vaginal mucous membrane, but pus was seen even up in the fornix and a drop in the cervix; the vagina was of a pinkish white hue, covered with pus. It did not bleed when manipulated with cotton on the applicator. In the gonorrhœal form one saw just what existed in the adult female—the vagina eroded, studded with angry looking granules, bleeding easily when manipulated, more intense physical signs than in the simple blennorrhœa.

The white and the yellow diplococcus shown under the microscope were often mistaken for the gonococcus of Neisser, being of about the same measurements, growing on potato, in bouillon, gelatine, etc.

The simple form of blennorrhœa occurred in boys as well as in girls, but had been described, he believed, only by Dr. Van Arsdale in his lectures before the New York Polyclinic. It affected the anterior urethra. True gonorrhœa in boys was like that in adults, and he had seen it in a babe yet in its mother's arms. The constitutional disturbances in these young subjects was almost nil. Three cases had come under his observation within a month, and in two it was from the same source. The boys were aged five and nine years respectively, and admitted that they had attempted to have intercourse with a small girl living in the same tenement, and when this girl was brought to him he found that she was suffering from gonorrhœal vulvo vaginitis. As to the mode of origin generally, the great mass of his cases of uro-genital blennorrhœa were of true gonorrhœa, and as a rule the origin had been kept secret so skilfully by the parents or

children that it could seldom be proven. He had not seen any cases in which it was known that there had been force. He believed many of them had arisen from actual sexual contact, either accidental or with intent. Simple vulvo vaginitis might, he thought, readily occur in girls. In this form the urethra was less likely to be affected, whereas in the gonorrhœal form the urethra had been also inflamed in all cases which had come under his observation. The joints which he had seen involved in the gonorrhœal form were the knee, ankle, and wrist. It was not yet known whether the gonococcus reached these parts through the lymph-channels. It was necessary to make repeated examinations for the gonococcus before deciding from its seeming absence that the case was non-gonorrhœal.

The treatment recommended, which he said would at least lessen the discharge and tend to reduce the inflammation, consisted in cleansing the vulva with corrosive sublimate, 1 to 5,000, examining the parts by carefully introducing the Tuttle urethral speculum or one equally suitable, then syringing out the vagina with the corrosive sublimate, drying, then painting the whole vagina with a ten per cent. solution of nitrate of silver. This was repeated at first every day, then every other day, then twice a week as the discharge diminished. The urethra was too small to be treated without undue pain.

Blennorrhœal Ophthalmia.—Dr. J. A. Andrews spoke of purulent ophthalmia of the newly born, a subject to which he had given considerable attention, and he had come to the conclusion that in the vast majority of cases it was not of gonorrhœal origin. For instance, during the last year he had not found this the nature of the affection in more than two out of over eighty cases. As to the possibility of mistaking other germs for the gonococcus, this had been clearly shown in the paper, and he had no doubt the mistake was often made. He believed Neisser himself had not been able to isolate this coccus.

Dr. A. F. Currier thought vulvo-vaginitis in children was seldom due to the sexual act. In tenements there were many other ways of exposure. It was often very difficult to say whether it were a simple or a gonorrhœal inflammation. He thought the vagina was usually first infected, the external genitals and skin secondarily.

Dr. O. C. Ludlow had examined certain dispensary statistics and, as showing the rarity of vulvo-vaginitis in children, said that only thirty cases had been reported out of a total number of ten thousand. He had seen two cases of gonorrhœa in boys who confessed to getting it from a prostitute. He also referred to two sisters who had the disease.

Dr. F. R. Sturgis expressed doubt in the etiological relation of the gonococcus of Neisser to gonorrhœa; again it was exceedingly difficult to detect it: it was also difficult to distinguish it from other cocci; its seeming absence did not exclude the possibility of its being present; finally, assuming it to be the cause of gonorrhœa, it was of little diagnostic value to most men, since the examination had to be conducted by one expert in bacteriological investigations.

Dr. Fordyce thought many of the complications of gonorrhœa might be due to toxic products developed by the bacteria.

Dr. Brewer had regarded the presence of a urethritis as strong evidence of a vaginitis being gonorrhœal.

Dr. Brown thought cleansing the major portion of the genito-urinary tract was about the most that could be done in the way of treatment, and said the disease required much longer time for cure than in the adult.

After a few more remarks the Section adjourned.

Glischruria, or mucous degeneration of the urine, has recently been studied by Albertoni. In two cases examined bacteriologically by him, a micro-organism was found to which the name bacterium glischrogenum was given. Dr. Renzi has found the same bacterium in a third case of this affection.

Clinical Department.

THE TREATMENT OF A CASE OF ELEPHANTIASIS (?) BY THE ELASTIC BANDAGE.

By CHARLES C. RANSOM, M.D.,

NEW YORK.

On January 6, 1893, Mrs. E. B——, of Buffalo, N. Y., presented herself to me for treatment and gave the following history: Her general health had always been good. She had never had any serious illness of any kind, except an attack of la grippe last winter, and never any trouble with the skin. Two years ago she had an acute inflammation of the right knee, which disappeared in a short time under treatment.

Last June, seven months ago, both legs, from the knees to the ankles, became irritated and itchy; this condition was followed within three or four days by a general diffused redness of the parts, and the skin became rapidly inflamed, swollen, and tender to the touch. The pain and swelling increased, and within a week the skin ruptured from the great distention, became excoriated in many places, and a serous oozing occurred from the denuded surfaces. Under treatment the inflammation subsided somewhat, but the skin never regained its normal condition. This state of affairs continued, with more or less frequent exacerbations of inflammation, until October, when upon the excoriated surfaces small wart-like growths began to develop. From this time the hardness and induration of the tissue became more marked, the legs increased gradually in size, and the pain, which had been more or less constant throughout the course of the disease, increased in severity until at times it was almost unbearable. The process seemed to grow worse in spite of the treatment prescribed, and the only relief she found was from large doses of opium. Upon examination I noted the following conditions:

The patient is considerably above the average height of women, and very large, her weight being 310 pounds. She is pale and anæmic in appearance and is exceedingly weak, nervous, and depressed from long-continued suffering and loss of sleep. She is able to walk only with the greatest exertion, owing quite as much to her debilitated state as to the condition of her legs, and upon her arrival here could with difficulty walk up one flight of stairs to her apartment. She has a cough which is much aggravated upon lying down, and she can only sleep in a sitting posture. Examination of the lungs revealed nothing of importance. Her pulse is weak and very irregular, but the heart sounds are normal. She has no appetite, her digestion is poor, the tongue is heavily coated, bowels constipated, and the urine scant, high-colored, and laden with urates, but contains neither albumin nor sugar.

Both legs, from the knees to the ankles, are swollen to nearly twice their natural size. The skin is tense, firm, and elastic to the touch and pits slightly on pressure. The feet are very much swollen, but are softer and pit more easily and deeply on pressure than the legs.

Upon both the anterior and posterior aspects of the legs are large irregular patches of a papillary growth, elevated from a quarter to half an inch or more above the surface. Between the papillæ, and here and there upon the elevations, are accumulations of sebaceous matter which emit a most offensive odor. Between and around these patches the skin is in many places excoriated, the denuded surfaces oozing a serous exudation; upon other portions there are thick adherent crusts. The skin where excoriated is bright red in color, while the elevated patches are darker red, purplish or brownish. On the posterior aspect of the right thigh, just above the popliteal space, is a dark red infiltrated patch about the size of a silver dollar. The subjective symptoms consist of a burning, stinging pain which is at times almost unbearable, and which seems to be intensified when the parts are

covered. so that the patient keeps them constantly exposed to the air.

I directed the patient to go to bed with the feet elevated. put her upon a bread-and-milk diet. and directed her to drink three pints of hot water per day. I further prescribed one half-grain tablet of calomel at night and a saline laxative in the morning. The legs were to be kept constantly wet with cloths dipped in lead and opium wash.

Within twenty-four hours the intensity of the inflammation was notably lessened and very great relief from pain was experienced. The following day I substituted a two per cent. solution of creolin for the lead and opium wash, mainly for the purpose of masking the disgusting odor from the secretions. and with excellent effect. Within the next two days the inflammation had almost entirely subsided. and I was able with a dermal curette to scrape off the accumulated masses of dead epithelium and even the tops of the warty growths. On the sixth day I applied rubber bandages to the legs, beginning them at the toe and extending them up to the knee. These bandages were worn constantly day and night, and were only removed twice a day to permit of the legs being washed with castile soap and water.

The general health of the patient began to improve almost from the beginning of the treatment. After the first week I discontinued the calomel, and gave her a tonic of iron, arsenic. and strychnine, and allowed her broths. eggs, and fresh meats in addition to her bread and milk. On the fourteenth day I permitted her to get up and be dressed, and she soon began to take moderate exercise. Her nights were now comfortable, and she was able to sleep eight hours or more without interruption. From this time on the progress of the case toward recovery was rapid and uneventful.

I last saw the patient on February 24th, seven weeks from my first visit. Her legs were somewhat smaller than their normal size, owing to compression of the bandages, which she was still wearing.

The skin was perfectly smooth and normal in appearance. except slight reddish and brownish discolorations which marked the sites of the warty patches. Her general health was excellent, her weight was reduced seventy pounds (from 310 to 240), she was able to walk about without difficulty, and felt stronger and better than she had for many months. She returned to her home on the following day.

152 West Forty-eighth Street.

A CASE OF PLACENTA PRÆVIA.

By WALTER CHEYNE, M.D.,

NEW YORK.

Mrs. R——. twenty-two years of age. had been the mother of four children. three, born at full term. being alive: the other, born at eight months, having lived only a few hours. On January 19th. without any uterine pain. and from no apparent cause. she had a considerable uterine hemorrhage. Upon examination that night I found the fundus uteri on a level with the umbilicus, a regular strong fœtal heart, and the placental bruit was heard low down on the right side of the uterus.

Internally. a dilatation of the os internum which would admit one finger was found. and on the right side the examining finger found the edge of the placenta covering about one-third of the internal os.

The suspicion of placenta prævia. from the situation of the bruit. was. of course. confirmed. with the additional knowledge that it was of marginal implantation. The patient complained of occipital headache and chilly sensations. It was decided to make no operative interference that night (unless hemorrhage should occur). and morphine was given in large doses. Next morning at 10.30 she had had no hemorrhage and no pains. The os internum was firmly contracted. Its characteristic rigidity was present in full force. The patient said she felt as well as ever. Morphine was continued all that day and absolute rest in bed. The following day—the 21st—at 9.10 A.M., I was summoned hastily. and found Mrs. R—— had had a large hemorrhage and was still bleeding profusely, with intense pains. The os being dilated to about the size of a silver dollar, and the occiput presenting, I ruptured the membranes, which caused an immediate cessation of the hemorrhage, and, in addition, I tamponed the vagina with cotton-wool pledgets. The pains continuing to be very strong, the tampons were removed at ten o'clock, and at 10.10 the head was born. and a few minutes later the second stage was completed, with no hemorrhage of consequence. It was my purpose, if there were any difficulty with the placenta. to go up into the uterus and dissect the placenta off with the fingers. its low situation rendering this quite simple. But the uterus contracted down strongly upon it and it was expelled by Credé's method without the least difficulty and with no hemorrhage. The fœtal surface of the placenta was considerably lacerated, the uterine surface came off apparently intact. and the cord was implanted laterally. The child. which (if conception had taken place immediately after the last menstruation on July 10th) had just completed its sixth calendar month. was placed in a home-made incubator and lived nine hours. The mother went through the ordinary period and made an uneventful recovery.

142 West Ninety-Seventh Street.

SUPPRESSION OF URINE FOR TEN DAYS.

By PHILIP FRANK O'HANLON, M.D.,

NEW YORK.

The following case illustrates the very great importance of asking when a patient last voided urine:

Mr. George C——. aged sixty-two. was ill at his home. I was called to see him. He presented no marked symptom of any kind. He simply did not feel as he ought to. He was a man of very few words. He had employed several doctors during his feeling of indisposition. One said he had malaria. another remarked that he had dyspepsia. another melancholia. I set to work to diagnose the case as best I knew how. I talked and I examined him to my entire satisfaction. After my endeavors in this line I concluded that I did not know any more about it then than I did when I began. He had. as I have already stated. no particular symptom or group of symptoms. He was without exception the dullest man I ever met with. I wrote a prescription for hydrarg. chlor. mit., gr. x., hoping that by giving him a cleaning out he would cheer up and display some life. instead of sitting in a chair and remaining silent from morning until night. The next day I called and again examined him. I could find nothing to give me a clue as to his ailment. Just as I was about to leave the apartment I said to his wife. who was standing by the bedside. "When did your husband pass his water?"

"When did you. George?" she asked.

"I do not know," he replied.

"Do not know!" I exclaimed.

"No," was his answer.

"Did you make any water since you saw me yesterday?" I asked. and he replied that he had not.

Further conversation on the subject brought out the fact that he had passed no water for six days. I did not believe this. as there was no dropsy. and on percussion the bladder was found to be empty. I wrote for citrate of potash. sweet spirits of nitre, and solution of acetate of ammonia. ordering a dose to be given every half-hour until he passed his urine freely. The next day I called, found the four-ounce mixture gone, and asked if the man had urinated. and was told that he had not. Here was a man who claimed not to have urinated for eight days. two days of which he had been closely watched. as I had explained to the wife the danger of such a condition. The man did not seem any the worse off for want of action on the part of his kidneys. and for my part I must

confess that I did not believe that he had not made water. I gave another diuretic containing infusion of digitalis and citrate of potash, and told the wife to be certain, in fact be able to take an oath that he did not pass urine. She sat by his bed all night. In the morning I called again, the third day of my visit. The patient had still failed to urinate. He was vomiting, had subsultus tendinum, but seemed to be in his general condition of spirits. I called in Dr. E. G. Janeway. He asked as to the action of the kidneys, and was very much surprised to learn that the man had not voided urine in ten days. In fact he hardly believed it. A catheter introduced into the bladder revealed the fact that there was no urine in it.

No dropsy, no pain of any kind anywhere, and a perfectly clear mind was the condition of this man who had made no urine in ten days. Professor Janeway found only a weak action of the heart. He ordered this organ to be stimulated by the use of salicylate of caffeine. He also ordered a hot-air bath. His prognosis was unfavorable, and he then and there stated that he did not think that the man could live forty-eight hours. The poor fellow lasted twelve hours. An hour before he died I used a catheter to no purpose. The bladder was entirely empty. The patient passed away without giving any sign of death. He turned over in the bed, told the attendant to turn down the lamp, and died.

I fail to find any case like this in any of the books. I never heard anyone whom I have spoken to on the subject who had seen or heard of any living being going ten days without voiding urine and then dying with as much ease and peace as one would go to sleep.

During the entire time, and also before I attended this man, he had not a pain or an ache of any kind, and no convulsions or unconsciousness until death set in.

AN UNUSUAL SUSCEPTIBILITY TO QUININE.

By L. HARRISON METTLER, M.D.,

CHICAGO, ILL.

As everybody knows, quinine sometimes produces marked erythema, with itching. The following case seems to me to be worth recording for two reasons: First, the smallness of the dose in comparison with the severity of the symptoms, and second, to offset the suspicion of Bartholow, that in most of these cases "the appearances on the skin are merely accidental and not causative." The patient, a young married woman, unusually talented, and inheriting the neurotic type of constitution, was under my care for a severe attack of follicular tonsillitis and pharyngitis. The temperature ran as high as 104.5°, while the pulse numbered 120 to the minute. There were the usual symptoms accompanying high fever, such as headache, dry, parched skin, general soreness of the entire body, intolerance of light, extreme restlessness, etc. The tonsils were red and congested, but not so enlarged as one would have expected. The entire pharyngeal vault was engorged and angry-looking. There was very little difficulty in swallowing, and no cough. My treatment consisted of belladonna and aconite internally, mustard foot-baths, ice to the throat, the use of an antiseptic spray with the atomizer, and sponging of the entire body. There had been a slow but gradual amelioration, when I was summoned one evening to find a sudden return of the high fever and other symptoms. Staying a while with the patient, I administered ten drops of the tincture of belladonna, with three drops of the tincture of aconite root, and half an hour later gave five grains of antipyrin, repeated in fifteen minutes. At once the pulse rate and temperature began to decline. After remaining with the patient another half hour, I left orders that no medicine was to be administered during the rest of the night. Only the use of the spray was to be continued. The patient told me she was susceptible to quinine, and begged me not to administer it to her. To satisfy myself, however, I left a single-grain capsule to be taken in the morning before breakfast. About 8 A.M. I was telephoned to come immediately, and to my surprise found the patient covered with a profuse red rash, wildly walking the floor, and scratching her hands and face so violently that a couple of friends who were with her tried to restrain her from injuring her skin. She seemed quite beside herself, and complained of the intolerable itching. The hands were slightly puffed and the eyes looked heavy. The skin was bright red, an appearance which promptly returned after pressure with the finger. The throat trouble had almost entirely disappeared as well as the fever. The patient declared she would have felt perfectly well if she had not taken the quinine, and with such proof before my eyes, she easily secured my positive promise never to administer the drug again to her. As the effects of the quinine began to wear off in about an hour, I gave her ten drops of the tincture of nux vomica, ordered her to take a warm bath, and recommended the use of the antiseptic spray only for a day or two longer.

According to Wild, small doses of quinine stimulate the contractile tissues in the blood-vessels as elsewhere, whereas large doses paralyze these same tissues. In my case there was an undoubted idiosyncrasy, which the peculiar nervous type of constitution may have had something to do with. In former fevers from other causes I have noticed in this same patient that quietness and the recumbent position caused the temperature to be elevated, while bodily activity, as in walking about, produced a singularly marked reduction of the temperature. I am unable to account for the phenomenon, except upon the unsatisfactory ground of extreme mobility or instability of the nervous apparatus. The patient usually enjoys the best of health, and seems to take a keen delight in life and all its attractions. In every way her constitution seems to be physically perfect, but it occurred to me that this unusual susceptibility to the use of quinine was sufficiently interesting to be placed upon record.

4228 GREENWOOD AVENUE.

THE PROGRESS OF SYMPHYSEOTOMY.

DR. ROBERT P. HARRIS, of Philadelphia, sends the following communication: "It will be of interest to mark the progress of symphyseotomy, since it ceased to be confined to Italy, which was in February 1892, and commenced to be tested, and to be received with favor, in other countries. For twenty years the revival of the operation met with no favor outside of Italy, and its advocates were confined almost exclusively to the city of Naples, where there were eleven operations in 1891. When tested in France, a little over a year ago, it at once assumed a new position, came rapidly into favor in Paris, and at the close of the year had been performed twenty-three times in that city, with the loss of two women and four children. In a little over one year the operation spread to Austria, Germany, Russia, England, Ireland, Canada, Brazil, and the United States of America.

"In 1886 there was but one operation in the world, and in 1892 there were probably as many as sixty; one-half of which belonged to France. From January, 1886, to the last case reported, there were 120 operations in the world, with a loss of 10 women. Italy had 44 of these cases, and lost but 2 women, after a labor, respectively, of ninety-six and eighty-four hours, or four and three and a half days. The first woman died of septicæmia, and the second of metro-peritonitis, both believed to be puerperal.

"The operation in Italy has had a lower rate of mortality than in the other nine countries collectively, and this may be attributed to the subosseous method of operation, and to the fact that very few women have been delivered at their own homes. One death in twenty-two cases is a mortality of $4\frac{6}{11}$ per cent. There is a temptation to perform the direct incision, as was done in the days of Sigault and Leroy, because of the rapidity and ease with which it can be done. It has been made through the mons veneris and symphysis, in Paris, in two minutes,

But when we consider the other objections to the direct incision, we are inclined to advocate the Naples method, so carefully tested and perfected by Professor Ottavio Morisani, after a trial of many years. The operation can be performed through a 1½-inch incision, and this does not require to be extended through the skin to a point nearer than three-fourths of an inch from the symphysis, the balance of the cutting being within. The knife of Galbiati can be much improved in form, and the symphysis opened therewith, without danger of wounding the bladder, urethra, or pudic artery; and besides, there is an advantage in not having a sutured wound under the binder that is to fix the pelvis so as to secure a rapid and perfect consolidation of the symphysis pubis.

"The mortality due directly to the operation is very small. There have been 4 deaths in France; 2 in Italy; 2 in the United States; 1 in Russia, and 1 in Austria, or 10 in 120; but nearly all of them were due to conditions resulting from labor. The causes of death in seven of the cases have been reported, and of these, but one death was the direct effect of the operation. Three women died after long and exhausting labors; one died of heart disease; a fifth had a small uterine rupture produced in an attempt to deliver with forceps, the blades being applied antero-posteriorly; a sixth died from septic peritonitis, attributed to the management of the case prior to the operation; and the seventh died of the same condition, due to the use of a saw, which evidently carried sepsis into the wound of the symphysis, and thence the inflammation extended, until the patient died of general peritonitis in eight days: the uterine cavity bore very little trace of disease.

"There have been 14 operations with 2 deaths, neither of them traumatic, in the United States. New York has had 5 cases; Philadelphia, 4; Brooklyn, 1; Baltimore, 1; Pittsburg, 1; Paris, Ill., 1; and Springfield, Ill., 1. This is making very good progress for six months, and brings us second to France. From 1886 to 1892 there were 31 operations in Italy; and there have probably been three times that many in all countries since the opening of 1892. We may look for more symphyseotomies to be performed in 1893 than of the conservative or exsective Cæsarean sections; not that these two forms of delivery will materially fall off in numbers; but because opening of the symphysis will largely be substituted for craniotomy, in cases having moderately contracted pelvis.

"Antiseptic symphyseotomy should have a very low death-rate, probably not more than one per cent. Emergency cases in private practice, or sent as such to maternities, will add to the record of death in both mothers and children: but such should be carefully looked into, and the real cause of death ascertained, so that the operation, *per se*, shall not be made to bear any more discredit than properly belongs to it."

REMOVAL OF A SAFETY-PIN FROM THE PHARYNX OF A CHILD AGED THREE MONTHS.

By W. D. HUNTINGTON, M.D.,

OAKLAND, CAL.

Baby C——, Italian, aged three months, was brought to my office by the parents, January 4, 1893: They were afraid it had swallowed a pin, and gave this history. Two days before, an older child, aged four, while playing with the baby, put a safety-pin in its mouth. The parents noticed nothing wrong with the child until the following evening, or twenty-four hours later, when it became fretful, apparently nauseated, and began to cough. It slept fairly well, with occasional coughing spells, through the night of January 3d. On the morning of January 4th the child became very fretful, and after repeated attempts, vomited several times.

On examination at the office, one end of the pin could be seen just in front of the uvula. It was easily reached with a pair of ear-forceps, but required very firm traction to dislodge it, as it was open and the sharp point was firmly imbedded in the tissues of the pharyngeal vault. There was considerable bleeding after removal. The pin was the ordinary, medium-sized, nickel safety-pin.

MALARIAL FEVER AT HIGH ALTITUDES.

Dr. Clarence J. Miner, of Combination, Mont., writes: "I wish to report a case that recently occurred in my practice. It was one of simple 'fever and ague;' but it is remarkable, indeed, so far as I can learn, unique, in that it occurred at an altitude of more than six thousand feet, in a patient that had never had an attack before and had not been in a lower altitude for more than a year. The diagnosis was unmistakable, a chill of the typical character at five o'clock in the afternoon of each day, for about two weeks. Furthermore, the attack yielded readily to quinine. Several practitioners of long experience in the mountains have told me they have never seen a case there, and I remember hearing Dr. Vaughan, of Ann Arbor, Mich., say that these germs could not exist at this altitude. If there is any literature on the subject I would be glad of a reference to it."

TRANSPOSITION OF THE VISCERA.

By ARTHUR E. BURNS, M.D.,

TACOMA, WASH.

Mr. W. C. T——, aged sixty-seven, came to me for relief of a very common ailment. Physical examination shows the heart to be on the right side. The apex strikes the chest-wall in the fifth right interspace and the mitral valve is behind the cartilage of the fourth right rib, showing that the organ is transposed. The liver is on the left side and of normal size. The stomach being moderately filled with fluid or solid I can get the usual dulness in median line, but I cannot determine positively, by percussion, palpation, or auscultation in which direction the pylorus is turned. The spleen is on the right side. Thus it is fair to state that Mr. T——'s viscera are all transposed. He has always been well, and has known that his heart was "out of joint," as he puts it, since boyhood.

These facts are substantiated by the examination of other physicians here who have examined him at my request.

A CASE OF PENETRATING GUN-SHOT WOUND OF THE ABDOMEN SUCCESSFULLY TREATED BY LAPAROTOMY.[1]

By RICHARD C. NEWTON, M.D.,

MONTCLAIR, N. J.

The following case, while it presents no startling features, is probably worthy of being recorded, as it will have some weight in settling the question of whether to operate or not in similar cases. Indeed, all laparotomies for wounds and injuries should, it seems to me, be carefully reported, whether succesful or not, since too much light cannot be thrown on this branch of operative surgery.

M. B——, aged twenty-four, single, domestic, Irish, was shot with homicidal intent on January 27, 1892, at 2.30 P.M. The weapon used was a cheap bulldog pistol, carrying a 44-calibre bullet. The muzzle of this weapon was held about three feet from the girl's body, her assailant standing in front of her and shooting her from above downward. After the discharge of the pistol the victim did not fall nor feel faint. She was considerably agitated, and ran out of the house and along the sidewalk toward the centre of the town, a distance of about two hundred yards. Meeting two men, she stopped and asked them to get a doctor for her. But they paid no attention to her and passed on. While she was hesitating, her assail-

[1] Extract from a paper read before the Society of the Alumni of Charity Hospital.

ant, who was a rejected suitor and had tried to kill her for refusing to marry him, came up to her and offered his assistance. He proposed that they go to the priest's house. While standing there M. B——, felt something drop from her vagina to the ground, and remarked to her companion that "some of her insides had dropped out." The object which fell to the ground proved to be the bullet, which had traversed her abdomen. It was contained in a clot of blood, and was subsequently secured and turned over to the police, who had by that time arrested the would-be murderer. From the size of the ball, etc., no doubt could be entertained that it was the one that had wounded M. B——. It was not much distorted in shape, and consequently could not have struck a bone or other hard body. The girl and her lover walked to the priest's house, about a quarter of a mile, the man affording her some support. He also extinguished, with his hands, her clothes, which were smouldering, having taken fire from the burning powder when the pistol was discharged. As the priest was not at home, the couple walked to the Sisters' house, which was near. The sister in charge summoned medical aid, and a hack was procured and the girl and her attendant were driven to the Mountainside Hospital. She got out of the vehicle herself and walked into the hospital and up-stairs, leaving a trail of blood behind her. She asserted that she had lost a great deal of blood, but was probably mistaken. She desired to make her water, and a catheter was passed, drawing two or three ounces of bloody urine. She presented no symptoms of shock. She was of stout and vigorous build, weighing 145 pounds. Pulse 90, strong and regular. No emesis nor faintness. The patient answered all questions with deliberation, and was as cool and composed as anyone in the room. On uncovering the abdomen a bullet wound was discovered two inches below the umbilicus, and one inch to the left of the median line. A superficial burn of the skin nearly circular in shape, about an inch and a half in diameter, was seen half an inch exterior to the bullet wound. No grains of powder were observed in or about this burn. The wound of the abdominal wall was evidently a wound of entrance, and no wound of exit could be found. Blood was flowing from the vagina at about the same rate and quantity as in an ordinary menstrual flow.

An operation having been determined upon, Dr. Love, of Montclair, assisted by the writer and the entire staff of the Mountainside Hospital and Dr. Wrightson, of Newark, proceeded to operate. The parts having been shaved and scrubbed with soap and water followed by a one to one thousand solution of bichloride of mercury and then by ether, an incision six and one-half inches long was made from just below the umbilicus nearly to the symphysis pubis. The peritoneum was reached by repeated strokes of the knife; it was then lifted up and snipped with the scissors and freely opened on a director. A small quantity of fluid and some blood were found in the peritoneal cavity. No injury to any of the abdominal viscera was discovered, except a longitudinal rent about three-fourths of an inch long in the anterior wall of the lower extremity of the sigmoid flexure and a lacerated wound between the rectum and vagina, evidently the track of the bullet. The missile had apparently cut the intestine in the convexity of a fold, but had not entered the lumen, and had passed through the cul-de-sac of Douglass into the vagina and thence on to the open air. The wound in the vaginal wall could not be demonstrated at the operation. The bladder, uterus, and rectum were found to be intact. The wound of the colon was sewed up with Czerny-Lembert sutures of catgut. The abdominal cavity was flushed out with warm Thiersch's solution. About sixteen feet of iodoform gauze was introduced into the lower part of the abdominal wound, and the incision closed with twelve silkworm-gut sutures, four deep and eight superficial ones.

The abdomen had been open thirty minutes. The whole time of operation was one hour. No apparent shock followed the operation, and except for two complications, to wit, an exceedingly obstinate constipation, to which the girl was naturally disposed, and a somewhat prolonged and painful cystitis, the patient made an excellent recovery and left the hospital cured March 20, 1892, less than two months after her injury.

No explanation can be given of the cystitis, except that the bladder must have been bruised by the bullet, and that it took nearly two months for it to heal. It was washed out daily with a boric acid solution. For some time during convalescence the amount of urine excreted was only sixteen ounces per diem. But this function also was completely restored before the patient left the hospital.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE ROYAL COLLEGE OF PHYSICIANS—RE-ELECTION OF SIR ANDREW CLARK AS PRESIDENT—FINANCES OF THE COLLEGE—APHASIA—CROUPOUS PNEUMONIA IN CHILDREN—RESECTION OF INTESTINES AND IMMEDIATE SUTURE IN GANGRENOUS HERNIA—CHOLERA ON THE FRENCH COAST—PRECAUTIONS AGAINST INVASION—EXCISION OF APPENDIX VERMIFORMIS—ULCERATIVE COLITIS—TRANSFUSION OF SALINE FLUID IN SHOCK—AEROTHERAPEUTICS IN LUNG DISEASE—HIGH ALTITUDES—COLORADO—SOUTH AFRICA.

LONDON, March 31, 1893.

THE early part of this week has been rather busy, as if in preparation for the holidays which mark the latter part. Thus on Monday, 27th, there was the meeting of Fellows of the Royal College of Physicians, at which Sir Andrew Clark delivered his annual address as president, and was once more elected to the office he has filled with such *eclat*. Sir Andrew has been president for the usual term of five years, and there was some doubt whether he would consent to serve a further term, as the office makes considerable demands on the time of the holder and a question of health might come in, as Sir Andrew was not well last autumn. At the election 104 Fellows voted for him out of an assembly of 120, and so he will continue in office another year. Of course this exceptional election is a high honor, and well expresses the favor in which he is held by his colleagues. In his address the finances of the college were prominently alluded to, and the president said that they were undergoing a severe strain in maintaining the research laboratories on the Embankment, and he suggested that a special committee should be appointed to deal with the expenses of the Examination Hall. It was satisfactory that the lawsuit with the General Medical Council had ended in a verdict for the college with costs. It would be a pity for the research laboratories to be closed, as in them the college seems at length to have entered on a work which may be of real use to the profession. It is to be remembered, however, that the college, with all its antiquity, its great prestige, and chartered privileges, has never occupied a strong position financially. Why not? Other old institutions have at least obtained the devotion of their members and been from time to time endowed with gifts and legacies. Is it that the Fellows of the college see that it is of little use, save to keep up their own order, and that such a purpose is unworthy of the support of educated men? Or is it that the majority of Fellows feel they have been co-opted as such on a plan that is unjust to many members? Whatever the cause, the college is poor, although it exercises enormous influence, and is not likely to be rich until it is reformed. Sir Andrew Clark is devoted to the interests of the college, he must be able to discern its defects, he is a model president, eloquent to advocate and firm to carry out a plan of reform, if the Fellows will only lay aside their selfish interests and entrust him with the task of bringing its antiquated constitution into accord with the spirit of the times.

On the evening of the 27th, also, the Medical Society had a meeting at which Dr. Beevor gave some account of a case of aphasia in a carpenter, fifty years of age, who had fallen from a scaffold fourteen feet high, alighting on the left side of his head. He was unconscious for about fifteen minutes, then walked home. He there complained of pain in the head and kept on repeating the words, "had a fall." Next day he was drowsy, but not paralyzed. When seen four days later, he could speak voluntarily but imperfectly, talked much nonsense, could understand spoken orders, but not written ones. But he could write spontaneously, though he could not write from dictation nor copy printed words. He could not repeat spoken words nor could he name objects shown him, though he could recognize their use. He recovered in about three weeks. Dr. Beevor considered there was probably meningeal hemorrhage or simple concussion, and he located the lesion over the visual word-centre in the supra-marginal and angular gyri. In reply to questions, Dr. Beevor said no satisfactory tests of smell could be applied, as he could not be sure the patient understood the questions: the optic disks were normal; if hemorrhage had occurred the recovery would be due to its absorption, and he did not think that, even in children, the right hemisphere was able to assume the functions of a damaged left.

Dr. Francis Hawkins then read a paper on "Croupous Pneumonia in Children," based on two hundred and twenty cases, and illustrated his conclusions by diagrams. Most cases occurred in March, May, and July; fewest in January, August, and December. The disease was most frequent at the ages of five and seven. Comparing his tables with others, he found the frequency of pneumonia rose gradually from the fifth to the twentieth year. The invasion was sudden, with mostly vomiting, cough, and pain; rigors and convulsions were not frequent; hæmoptysis was extremely rare. The average daily temperature before crisis was 103° F. to 104° F. In about one-seventh of the cases there was hectic, but in only three of these was there pus in the pleura. Crisis was most often on the sixth day, often on the seventh and eighth. In basic usually later than in apical cases. Rusty expectoration was observed in seven cases, the youngest child being six. Pleurisy occurred in sixteen cases. A soft systolic murmur was noted as arising in the course of six cases, and pericarditis in one patient who had had rheumatism. Albuminuria was discovered in seven cases, and herpes in thirty six. Some interesting remarks were offered by several speakers, especially as to the extreme care required in giving alcohol, the distinction of catarrhal cases, and the risk of applying ice to the left side on account of the heart.

On Tuesday there was a discussion at the Royal Medical and Chirurgical Society on "Resection of the Intestine and Immediate Suture in Gangrenous Hernia," *à propos* of an interesting case related by Mr. Kendall Franks. The patient was a woman of thirty, with umbilical hernia which had become strangulated. After thirty and one-quarter hours, herniotomy was performed. The loop was gangrenous and the abdomen full of fluid associated with an ovarian tumor. Nine and one-fourth inches were excised and the ends united by Gély's suture. A glass drainage-tube was inserted which was removed on the fourth day. The bowels acted regularly after the fifth day and recovery was complete. Five weeks later ovariotomy was performed, when the intestine was inspected and perfect union found. The line of union could be felt as a thickening, but could not be detected by the eye.

Although statistics are not very favorable, resection seems to be an ideal operation, a view held by the author and by Mr. Lockwood, though the latter prefers resecting through the original wound, and if necessary dividing Poupart's ligament. No doubt, as some speakers remarked, the term "gangrenous" may have a different meaning to different surgeons, and it is probable resection may have been performed when there was not really gangrene. On the other hand, some fatal cases have probably been left unrecorded. The statistics collected by Mr. Franks show a mortality not much in excess of that for all cases of strangulated hernia, so that these or other causes are probably at work and will have to be eliminated, or else we must wait the results of larger numbers.

April 7, 1893.

THIS week has brought us face to face with the danger of an early invasion of cholera. We are now informed that for the last two weeks the disease has been epidemic in Lorient, a town of about forty thousand inhabitants, situated on the opposite French coast, between Brest and Nantes. It is now admitted, as the outbreak can no longer be altogether concealed, that seventy deaths and two hundred cases have occurred in the town in the last fortnight, but it is said that the type of the disease is milder than in Russia and Germany. These assurances can give little satisfaction considering that they closely resemble the official statements last year which the facts so completely falsified.

Lorient is a naval arsenal and a hot-bed of typhoid fever, the naval forces and the small garrison both suffering unduly from this disease. And no wonder, when we consider the usual insanitary condition of French towns and that Lorient is behind many of them in its arrangements. Our trade with Lorient is small, but there is obviously great danger that the other channel ports of France will become infected. Last autumn, although the epidemic did not secure a firm foothold in these parts, except in Havre, the number of local outbreaks was very large Scarcely any altogether escaped, and at Calais and Boulogne there was such a series of cases that we were in constant danger. If this fresh outbreak should attack all the ports with which there is constant communication, the danger will be greater still. It is one satisfaction that our sanitary authorities are better prepared than ever. They were apprised by telegraph of the outbreak at Lorient as soon as it came to the knowledge of the government, but that was late. Surely it is a crime against neighbors and against humanity for civilized governments to conceal the first cases, and so prevent the earliest precautions being taken against dangers they are powerless to avert.

There are some indications that excision of the vermiform appendix may soon become less fashionable, in which case the operation will only be performed in comparatively few cases. No one denies that the majority of cases of so-called typhlitis recover under medical treatment, and even relapsing cases often do very well without surgical interference. Naturally, therefore, physicians have been reluctant to hand over typhlitis to the surgeons, and lately the latter have been putting to themselves some searching questions as to the conditions calling for excision of the appendix. Even Mr. Treves, who is not credited with any deficiency of the *furor operandi*, has uttered words of warning: At the Harveian Society he gave an account of fourteen cases in which he had removed the appendix for severe relapsing typhlitis with adhesions to the iliac artery, ileum, cæcum, ureter, bladder, rectum, etc., and he laid it down that operation was only to be undertaken when the patient is rendered an invalid by frequent severe attacks, when there is evidence of pus about the appendix, and when it can be felt as enlarged during the quiescent period. Probably American surgeons will not yet endorse this view, and their practice was severely condemned by Mr. Treves. The speakers who followed regarded the cases detailed as exceptionally severe, and had found recovery common without surgical aid.

At the same meeting of the Harveian Society Dr. Caley related a case of ulcerative colitis in a student of twenty-three. The onset was sudden, the abdominal pain intense, the diarrhœa severe throughout, the stools offensive with much discolored blood, sometimes little else, the weakness, prostration, and emaciation extreme. The

colon was much distended, and at one time there was great pain and tenderness in the region of the sigmoid flexure with the passage of bright-red blood. The pyrexia was irregular, and the temperature often little above normal. After six weeks the patient began to improve, but the recovery was slow. Dr. Phillips remarked that such cases were not so uncommon as many supposed, and were sometimes regarded as English dysentery. Six cases had been seen by him at the bedside and in the post-mortem room. The attack began generally with pain in the back, like an infectious fever. Melæna might be absent throughout, though the intestine was deeply ulcerated. Indeed, perforation might take place without collapse, and fæces might pass into the peritoneal cavity for days before death. Enemata should therefore be given with the greatest caution. The pathology of the disease is obscure, perhaps it is due to some disturbance of the great abdominal nerve plexuses.

Transfusion, or as the Germans call it, infusion of normal saline solution, is becoming more extensively resorted to. Mr. Mayo Robson lately gave details of two cases to the Clinical Society, in which the transfusion averted impending death from intense shock after operations, and said that his personal experience induced him, when he went to a capital operation, to take with him a packet of the salt in readiness to make four pints of normal solution. He said it had been shown that shock is due to paralysis of the heart and vaso motor paralysis of the abdominal vessels, the sudden dilatation of which simulates sudden hemorrhage. A Higgenson syringe to which is attached a small rubber tube and a glass pipette, is a sufficient instrument. Some cases were mentioned by members of the society which were much benefited at first, but which died some time after from a return of collapse. Mr. Robson said in such cases the transfusion should be repeated, as it implied continuation of shock. He once injected five pints, often he had used four, sometimes only three. In cholera the condition of the blood was not the same. In three cases, when operating for rupture of extra-uterine gestation, extreme collapse coming on, he had filled the abdominal cavity with the saline fluid, and the pulse at once improved and his patients recovered.

Your readers will be interested to learn that in the Lumleian lectures delivered this year by Dr. C. T. Williams, who took for his subject aero-therapeutics in lung disease, the climate of Colorado took high rank. It is true that the lecturer's cases were few as compared with those in other resorts, but they were greatly benefited, and statistics from various sources confirm the conclusion that the climate presents great advantages. It is remarkable for its dryness, its bright, clear, frosty nights, its sunny days, its great choice of elevation and the opportunity it offers for open-air life. The accommodation is also good, and patients may often find profitable employment. High altitudes were recommended not only in phthisis, but in imperfect development of the thorax, in chronic pneumonia without bronchiectasis, in chronic pleurisy when the lung has not expanded after the removal of fluid, and in bronchial asthma without emphysema. But perhaps at present it is more important to specify the cases in which such climates are contra-indicated. They are: 1, phthisis with double cavities; 2, fibroid phthisis and all cases where the pulmonary area hardly suffices for respiration at sea-level; 3, catarrhal and laryngeal phthisis; 4, all cases of acute phthisis, especially when there is great irritability of the nervous system; 5, pyrexial cases; 6, emphysema; 7, chronic bronchitis and bronchiectasis; 8, diseases of the heart and great vessels, of the liver, of the kidneys, including, according to Sir A. Clark, all forms of albuminuria; 9, diseases of the brain and the spinal cord, and all cases of nervous hypersensibility; 10, anæmia; 11, aged patients or any unable to take exercise. Dr. Williams also recommended other high altitudes, among them those of South Africa. He said delicate patients might there sleep in the open air all the year round, but this I contradict on the authority of those who have been there. For two or three months of the winter the cold is intense, from ten to fifteen degrees of frost perhaps, and there is great difficulty to keep warm during the night. The rest of the Lumleian lectures contained various climatological statistics with the lecturer's deductions.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 15, 1893.

	Cases.	Deaths.
Typhus fever	4	7
Typhoid fever	16	4
Scarlet fever	201	20
Cerebro-spinal meningitis	8	11
Measles	132	4
Diphtheria	122	35
Small-pox	14	0
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

An Italian Remedy for Gout.—A correspondent of the *British Medical Journal* writes that, having been a martyr to gout for many years, and deriving but little relief from ordinary treatment, he was induced to write to the Lady Superior of the convent at Pistori, Tuscany, for some powder, which he took daily for one year. As the result has been so satisfactory, he considers that if an analysis of this powder were made and published, it might be of service to others. The powder is of a greenish color, and has a bitter taste resembling gentian. A microscopic examination shows that it is composed of vegetable tissue with starch granules of two distinct kinds. The bitter principle is extracted by water and alcohol, and from these extracts no alkaloidal body could be obtained. The powder, therefore, appears to be simply a vegetable one containing a bitter principle. A remedy for gout has been in use on the Continent for a very long period, the basis of which is gentian. The "Duke of Portland's powder for gout" is supposed to be this remedy. It is composed of equal parts of the following: Gentian root, birthwort root (Aristolochia rotunda), tops and leaves of germander (Chamœdrys), tops and leaves of ground pine (Chamœpitys), tops and leaves of lesser centaury (Chironoca centaurium). Our contemporary is of the opinion that the powder from the convent at Pistori is similar in composition to the above.

Llareta in Gonorrhœa.—Dr. Infante, of Santiago de Chile, has obtained excellent results in the treatment of gonorrhœa by the fluid extract of llareta. He employs a two per cent. mixture of the extract in water, giving it in doses of two spoonfuls a day. It is a balsam derived from the Haplopappus llareta a plant which grows abundantly in the northern part of Chile, especially in the province of Coquimbo. The bruised leaves of the haplopappus have long been employed in this region as a vulnerary.

African Fever, or "black water fever," the nature of which has been a matter of dispute, has been shown now to be a severe form of malarial infection.

The State and the Gold "Cures."—It is not creditable to the intelligence of the people of Colorado nor to the discernment of certain of its law-makers, that there should be, as there now are, on the legislative calendar, two bills for the establishment of so-called "gold cures" for inebriety at the expense of the Commonwealth. One favors the original and shameless Keeley method, the other favors the imitation institution bearing the name of

a religious mountebank who wears the livery of God in order to better serve Mammon. The two "cures" are, for the moment, fighting each other, because each desires sole possession of the large and juicy bone known as "State patronage."—*Denver Medical Times.*

Starch Baths in Chronic Gout.—Mr. Edward Stechan, M.B. (Ulverston), recommends the treatment of chronic gout by means of hot starch baths. The excretory action of the skin is powerfully stimulated by water at a temperature of 105° F. The tendency of gouty patients to contract eczema on taking hot baths is counteracted by the starch (1 lb. to 40 gallons of water): in fact, patches of eczema which may be present on the patient tend to vanish thereby.—*British Medical Journal.*

Mis-treatment of Medical Witnesses in the Courts.—We desire to emphatically place upon record a protest against the present attitude of the bench in this State toward medical men who are summoned into court to give expert testimony. A witness who has given a fair and unbiassed statement of his opinion in regard to any certain case may have his character impugned and the vilest sort of personal abuse heaped upon him by any attorney—any ignorant, malicious, lying, or drunken lawyer—and the "honorable judge," knowing the witness to have no opportunity for reply or redress, knowing the attorney's charges to be false and malicious, knowing that the reputation of the witness may be seriously injured by such unfounded allegations, the "honorable judge" sits inert upon his holy pagoda—the bench—tacitly sanctioning the brutal and shameful assault. Shame on such judges! Shame on such lawyers! Shame on the practice of the court that will permit such abominable proceedings! Such an occurrence happened during the Melburn murder trial a year ago. Again it occurred this month at the trial of Anton Woode for murder. And the judge who permitted and tacitly sanctioned the vile attack, still sits upon the bench, and we must still call him "honorable."—*Denver Medical Times.*

The Complexion and Cracked Nipples.—Dr. Alice MacLean Ross calls attention to a certain relation existing between complexion and laceration of the perineum and cracked nipples. She says: "In red-haired women and those brunettes who have red lips, red cheeks, and are inclined to freckle rather than to tan, lacerated perineum and cracked nipples occur most frequently. And those sallow-skinned blondes who tan rather than freckle, and who have a tendency to a deposit of pigment in the areola of the nipple, about the neck and armpits, are least liable to suffer from these accidents. The first class seem to have friable tissues and thin skin, and the second tough muscles and thick skin. Other women are liable to suffer or able to resist as they lean toward one type or the other. This relation is to me marked, and is of value in prophylaxis."—*Medical and Surgical Reporter.*

A New Departure in Protective Inoculations.—Recent researches in the means of conferring immunity against the dreaded cholera bacillus have excited a good deal of interest in professional and extra-professional circles, and the paper read last week before the Pathological Society by Dr. Klein will add thereto. Briefly stated, Dr. Klein has discovered that the immunity against the action of the cholera virus can be obtained by means of inoculations with the substances obtained from the protoplasm of several other bacteria, notably that of the proteus vulgaris and the bacillus coli. The importance of the discovery lies in the fact that, whereas inoculation with the attenuated virus of cholera is not unattended with risk, at any rate in inexperienced hands, no such risk is involved when the protective substance is obtained from a non-pathogenic organism. The intra cellular poison utilized by Dr. Klein must be carefully distinguished from the various toxines and albumoses which are elaborated by these organisms in cultivating mediums. He found, indeed, that inoculation with the intra-cellular poison of any of the six varieties experimented with does not afford any protection against the toxines in question. We are dealing therefore with two distinct classes of substances which are not reciprocally protective.

Mistakes by Medical Men.—A correspondent of the *Provincial Medical Journal* writes: An incident occurred last month in the House of Commons which was reported in the papers, under the above heading, in the following terms: Mr. Macdona asked the President of the Local Government Board whether it was true that last year, owing to mistakes made by medical men in notifying supposed cases of infectious diseases, 462 persons were removed to fever and small-pox hospitals who were suffering neither from fever nor small-pox, and that 102 of these have lost their lives through removal to these centres of infection; and, if so, what did the Government intend to do to protect the poor from this danger; and whether it was a fact that the fees, amounting to £57 15s., for notification in these cases had been paid to the medical men who sent them in. Mr. H. Fowler said the 462 cases referred to represented the total number of patients who during the year 1891 were admitted into hospitals of the Metropolitan Asylums Board, although those patients were not suffering from any disease for which those hospitals were intended. In 450 of those cases admission was granted upon certificates that were afterward found to have been incorrect. Of these 450 patients admitted upon incorrect certificates 97 subsequently died. But in every case the patient died from the disease from which he was suffering at the time of admission, and it was altogether incorrect to allege that the deaths were due to the removal of the patients to the Asylums. There was little doubt that fees were paid to the medical officers who gave the certificates referred to, but a laborious search would be necessary to ascertain the facts. It is extremely difficult at times to recognize eruptive fevers at their very earliest stage. The above mistakes show some carelessness, perhaps; but the error had better be on the safe side.

The Orchiococcus.—It has hitherto been taken for granted that the occurrence of orchitis—or rather epididymitis—in the course of an attack of gonorrhœa was due to the invasion of that organ by the migration of the gonococcus of Neisser. MM. Hugouneng and Eraud (Académie des Sciences, February 27th) appear, however, to have successfully isolated the specific microbe of blennorrhagic epididymitis. The newly discovered micro-organism is a diplococcus of much the same shape as Neisser's gonococcus, but it is larger, the isolated coccus measuring about 1 μ. Like the gonococcus, it is discolored by Gram's method, but it is distinguishable from it by the following properties: while the gonococcus is with difficulty cultivated even on human serum, in which it dies at the end of two or three days, the orchiococcus thrives well on peptone, peptonized gelatine, ordinary bouillon, and alkaline solutions of casein and nuclein, maintaining in these different media the faculty of reproduction and the integrity of its forms for a year and longer. The orchiococcus is frequently found in gonorrhœal pus during the first few days of the disease. It happens, however, sometimes that this pus sown upon gelatine yields no cult ure. Now, when this is the case, such patients are never attacked with orchitis. If, on the contrary, pus thus grown on gelatine yields colonies of the micro-organism, the onset of the testicular complication is to be feared. Negative cultivation results enable us therefore to foretell that the gonorrhœa will run its course without the epididymis being infected. The microbe exercises no action on the conjunctiva, the areolar tissue, the peritoneum, or on the urethra itself. On introducing the culture (on peptonized bouillon) into the testis of the dog, an attack of orchitis is induced. The inflammatory products collected from the bouillion culture produce the same effects.—*The Lancet.*

An Institute for the Climatic Treatment of Tuberculosis has been erected in Wiener Wald, Austria, by Baron Rothschild, at an expense of $75,000.

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A CONTRIBUTION TO THE PATHOLOGY OF TRAUMATIC EPILEPSY.

COMPRISING THE REPORT OF THE MICROSCOPICAL EXAMINATION IN TWO CASES OPERATED UPON BY TREPHINING.

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FOR the opportunity of presenting these cases I am indebted to Professor Starr, who gave me the clinical histories, and the portions of the brains removed at the operations for microscopical study. The impetus which localization has given to brain surgery, and its rather extensive application at the present time, lends some interest to the study of these specimens. But attention is more especially directed to the question as to whether certain minute, very delicate changes, rather difficult to recognize in the removed fragments of the motor zones in these cases, may be considered as underlying the phenomena of epilepsy. The clinical histories are as follows:

CASE I. *Trauma—General Convulsions Beginning in Left Arm—Splinter of Bone in the Brain Removed—Recovery—Recurrence of Fits—Death.*—A. G——, male, aged twenty-four, met with an injury in April, 1888, which produced a fracture of the skull on the right side, at about the middle of the coronal suture. After the injury he was ill with fever and delirium about six weeks, but gradually recovered. Three years after this injury he began to have convulsions, from which he had suffered at intervals up to April, 1892, when he was first seen. The attacks began with a movement of the left arm, and a sensation of numbness in the left hand, and with a turning of the head to the left; he then lost consciousness and the convulsion became general. He has had as many as two fits in a day, and the longest interval during the year was nine weeks. He had three fits in March, 1892. He was very dull mentally, and had been treated with very large doses of bromide of potassium, which diminished the frequency of, but did not arrest, the fits.

Operation by trephining was performed by Dr. McBurney on April 2, 1892. The skull was opened at the point of fracture over the arm centre on the right side. The external table was found to be fractured, but the internal table appeared to be uninjured. The dura was very much thickened, and the pia and brain were decidedly œdematous and yellower than normal. The pulsation in the brain was greater around the softened discolored area than in it. This discolored area pitted upon pressure, and to the touch gave the impression as if a cyst lay beneath, but puncture in all directions with a hypodermic needle failed to reach any cyst. The wound healed easily. He had no paralysis, and in three weeks he was discharged from the hospital. At that time he had very much improved mentally, and had had no fits. Soon after leaving the hospital the fits began again, and in the summer they occurred with greater frequency than before the operation, and in August he died in convulsions.

CASE II. *Trauma—Spasms of Right Hand—Cyst Removed—Recovery for Six Months—Recurrence—Second Trephining—Recovery.*—Male, aged fourteen, at the age of four had a severe fall, fracturing his skull over the left coronal suture. As a result of this he developed right hemiplegia with partial right hemianæsthesia, but without any aphasia. Traces of this hemiplegia still remain. At the age of twelve and a half he had a second fall, hit upon his head, and soon after this he began to suffer from Jacksonian epilepsy. His fits always began with a tingling and spasm in the right hand, which extended to the arm and then down the right leg, the face being very rarely involved, though occasionally the head turned to the right. There was no loss of consciousness during the attack. It lasted about a minute, and he felt slightly weaker in the arm and leg after it. He has had as many as six attacks in a day. The boy was mentally very bright and had no headache. Evidence of an old depressed fracture was found in the skull, the depression extending forward over the first frontal convolution, so that its position was decidedly anterior to the motor area of the arm. Medical treatment having failed to relieve these attacks, it was resolved to trephine. The point selected was the arm centre in the upper third of the central convolution, though its position was an inch and a half posterior to the position of the old fracture. Dr. McBurney operated at Roosevelt Hospital on January 30, 1892. On exposing the dura it was found adherent to the bone and did not pulsate. When the dura was laid back it was found adherent to the pia, which was thickened and opaque so that the brain was not visible beneath it. On dividing the pia a cyst was found lying beneath the surface of the brain, and from this a drachm of clear fluid was evacuated. The cyst had lain in the pia itself. The walls of the cyst were removed. A strand of thickened pia was found running forward toward the old scar. The opening in the bone was therefore enlarged in the direction of the old fracture until this was reached, and a second cyst was found beneath the old fracture. This cyst was also evacuated of about two drachms of fluid and its walls taken away. The brain beneath the cysts appeared to be somewhat atrophied but pulsated normally. It had an appearance of being slightly more yellow than normal brain-tissue, and the number of blood-vessels and capillaries over its surface seemed to be rather increased. The wound was closed and healed well, and from January 30, 1892, the date of operation, until April, the boy had no fits at all. He then returned to the clinic, complaining of a return of his old attacks. On examination of the head it was found that there was a small collection of pus beneath the scalp, over the site of the opening in the bone. This pus was evacuated and the small abscess-cavity at once healed. From that date until August, 1892, the boy had no attacks. Then his attacks began again, and increased in frequency until in December he was having three or four daily. These attacks began with tingling and twitching in the right hand which extended up the arm and shoulder, then down the side to the leg, arm and leg twitching together for the space of from five to fifteen minutes. Subsequently to the attacks both arm and leg were slightly paretic, the face never being involved, and consciousness not being lost. The use of bromides during this period had no effect upon the increase of the attacks, and he was therefore again advised to go into the hospital for operation. On January 7, 1893, Dr. McBurney operated. On exposure of the shaven head the scalp was seen to be thick and tense, so that at no place was there any perceptible depression around the old scar or over the defect in the bone. Pulsation of the brain was perceptible by palpation over the area from which the bone had previously been removed, and which corresponded to the arm centre. The tissues were very much thickened, and

it was thought best to avoid their direct incision. A semilunar incision was therefore made, the summit of which passed somewhat more to the left of the median line than the preceding incision and by dissecting up its anterior and posterior portions, the healthy bone below the old trephine was reached, the scalp being carefully dissected away from the old scar-tissue. A triangular opening was then chiselled in the bone about an inch and a half long and three-fourths of an inch wide. The bone was found to be closely adherent to the dura. The dura was seen to be thickened, and on being divided and turned back it was closely adherent to the pia. The pia and brain were found to be welded together in a thick connective-tissue mass. Palpation of this gave the impression of fluid beneath it. Puncture with a hypodermic syringe brought away a small amount of clear serous fluid from a cavity about half an inch beneath the cortex. Incision was made into this cavity through the brain above it. When the brain-tissue was incised it was found to present an abnormal appearance. There was no clear line of demarcation between the cortex and the white matter beneath it, but a connective-tissue mass had taken the place of the cortex. This mass of tissue was therefore excised, a piece of a lens shape, about an inch long by half an inch wide, being removed. It appeared to be scar-tissue. The second puncture with a hypodermic needle, at a point an inch farther forward, revealed the presence of another cyst, and the incision in the brain was therefore carried forward so as to empty this. Hemorrhage was pretty free, but after the scar-tissue had been excised the sides of the wound in the brain was seen to consist of fairly normal gray and white substance. The wound was packed with iodoform gauze and dressed antiseptically. The next day the boy was very comfortable, had no paralysis or anæsthesia. Within two weeks the wound had healed. He has had no attacks up to March, 1893.

Microscopical Examination. — In describing these morphological changes in the motor cortex, which harmonize very well with the symptoms of epilepsy, it is of especial importance to preface the details of the examination with some general remarks about the technical limitations of investigations in the finer pathology of the cortex, and the extreme difficulties of detecting and attaching significance to the very early and subtle changes in the cortical elements. In such a preface the investigator should indicate the great caution and most refined technique which a study of minute cortical changes demands; for then the reader will appreciate that the observer has guarded against mistaking for lesions entirely artificial changes, or normal structures which, especially in the cortex, are by no means easy to define.

The difficulty in the way of research in cortical pathology is the complexity of the brain cortex; it is most supremely highly organized, and is far beyond all other organs and tissues in the textural delicacy of its anatomical elements and complexity of their arrangement. In most of the other organs the structure of the parenchyma is comparatively simple, and the stroma is arranged in such a way that there is a contrast between the two in the sections; thus in the kidney or liver, for example, the changes in the stroma or in the parenchyma attending a chronic inflammation may be determined very accurately. The stroma is so distinct from the parenchyma, and its distribution is so readily followed, that a very beginning of an increase in its substance may usually be easily and positively recognized. In the same way the distinctive distribution of the comparatively simple parenchyma cells permits early changes in them to be determined with but little difficulty.

When we come to the brain cortex, however, the contrast between stroma and parenchyma, which in other organs affords most valuable topographical aid, is lost, and the determination of changes in either stroma or parenchyma is correspondingly difficult. For in the brain cortex the neuroglia and ganglion cells, corresponding respectively to the stroma and parenchyma of other organs, are not only more intricately constructed, but are diffusely arranged. The neuroglia and ganglion cells are mingled together in a most intricate way, and are surrounded by a great wilderness of processes derived from both, which forms a very large part of what is conveniently called the basement substance of the gray matter.

Thus it can be understood what a difficult matter it is to determine any beginning increase or proliferation of the neuroglia, which in ordinarily stained sections presents itself as multitudes of small round nuclei scattered all through the gray matter, without any boundaries or limitations. This problem of the determination of a very early increase in the neuroglia becomes the more baffling because, as a rule, this tissue grows so slowly that the all-important criterion of the proliferation of cells, namely, the phases of karyokinesis, are difficult to find.

The investigation of minute and early changes in the other intrinsic element of the cortex—the ganglion cell—is rendered difficult by the presence of artifacts or artificial changes occurring after death. The structure of the ganglion cell is so delicate and intricate, and the cortex is so slowly permeable to the bichromate solutions, that a number of post-mortem changes are liable to occur in the cell or are induced by the action of the hardening agents. Such artificial changes may simulate very closely the results of disease, and when these artificial changes are present in a cortex with suspected disease of the ganglion cells, it becomes exceedingly difficult to understand the lesions, or to determine in what degree the changes are due to disease and in what degree to artificial conditions.

With the best of care we can recognize, after all, but the coarser and grosser lesion in the ganglion-cell body, which is only a part of the cell. Changes in the great forest of processes of the cell, representing a volume of protoplasm fully as large, if not larger, than the cell body itself, are beyond our cognizance even with Golgi's methods, which seem to be of little service in showing minute changes in the ganglion cells. The aid of mitosis as an index of pathological changes in the ganglion cells is also absent, since the latest studies on this subject show that the ganglion cells seldom if ever proliferate.

Thus, owing either to perplexing artifacts, or to the inherent complexity of the cortex, its more minute changes seem beyond recognition at present, and when we do detect cortical disease processes it is only after they have gone on to some considerable extent beyond the initial stages, and have become rather coarse, extensive, or materially destructive. Since the wonderful revelations of the Golgi methods, one can reasonably enough conceive that changes may occur in the cortex which are of the greatest etiological significance, but so subtle that they are entirely hidden from our view.

It certainly seems appropriate, therefore, to speak with all this detail about these peculiar difficulties in the way of pathological investigation of the cortex, for if real advances are to be made in the finer pathology of the cortex its difficulties of investigation should be appreciated, and if the lesions to be described in these particular cases are to be at all considered as underlying the phenomena of epilepsy, we must approach the problem with all possible caution. I also wish to show that the material placed at my disposal by Professor Starr has such great advantages for investigation, both in its structure and preparation, that the difficulties and errors in determining early cortical changes are considerably reduced.

From the fact that these minute fragments of the cortex were immediately transferred from the living body to the hardening fluid, the changes in the ganglion cells are especially significant, for the element of artificial change incident to post-mortem alteration or the process of hardening larger portions of the cortex, which frequently interferes with making positive statements about the minute changes in the ganglion cells, is more thoroughly excluded than in the material from an ordinary post-mortem examination. Even allowing for the fact that Müller's fluid does not preserve the ganglion cells perfectly, the

damage to the ganglion cells, presently described, must have existed during life.

Microscopic Examination of Case I.—We may now go on with the detailed microscopical examination of the removed portion of the brain in Case I., and this comprises a description of: 1. A rigid plate of connective tissue acting as a foreign body and pressing against the brain. 2. Changes in the pia mater. 3. Certain lesions of the cortex of the brain, consisting of both changes in the ganglion cells and in the neuroglia.

Description of the Inwardly Projecting Plate of Connective Tissue Indenting the Surface of the Brain.—The removed portion was hardened in Müller's fluid plus one-sixth its volume of strong alcohol for three weeks. The specimen was very small, measuring about ten by six millimetres in diameter, and its central portion furnished about one hundred sections which were cut in series and stained double with hæmatoxylon and eosin, and by the picro-acid-fuchsin method.

Sections from the centre of the specimen, when reconstructed, show that a tiny plate of very dense, partially calcified connective tissue projected obliquely downward, apparently from the dura mater against the surface of the brain. Here the plate is firmly attached to a minute localized patch of thickened pia mater, and seems directly or indirectly to have pressed on the brain, for the cortex shows an abrupt little pit or depression (see Fig. 1) just

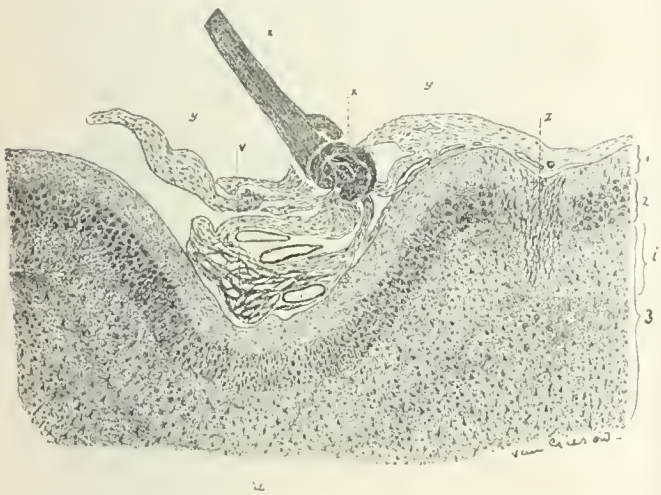

FIG. 1.—From the Centre of the Removed Portion of the Brain in Case I. The topographical relations of the rigid calcified spiculum of connective tissue, the thickened pia mater, and the depressed region of the cortex, are seen: *x.x*, calcific spiculum of connective tissue; *yy*, moderately thickened pia mater; *z*, anastomosing wedge shaped group of capillaries passing into the cortex from the pia mater. 1, 2, and 3, first, second, and third layers of the gray matter; *i*, upper portion of the third layer.

beneath the inwardly projecting plate. This cortical depression corresponding to the plate is cone-shaped (with the apex projecting inward), and has approximately an altitude of three and three-fourths mm. and a base four to five mm. in diameter.

In the individual sections from the centre of the specimen the plate of connective tissue appears as a very dense, finely lamellated, partially calcified spiculum about three-fourths of a millimetre broad and three millimetres long (see Fig. 1, *xx*). At its inner extremity the spiculum has a globular enlargement and the lamellæ do not run parallel as in the outer portion, but pass in various directions mostly concentrically arranged about a tiny central nodule or core. The outer end of the spiculum is entirely free in all of the sections, so that it is difficult to determine what the spiculum is a part of, or where it grew from. The inner end of the spiculum is attached in all directions by many diverging fascicles of the thickened pia mater.

As the sections approach the margin of the specimen at one side the plate grows a trifle smaller, but still persists to the free edge, so that it seems probable that not all of the plate was removed at the operation. At any rate, it may be said that the removed portion was not large enough to completely surround the plate. From the very dense structure of this connective tissue, and from the fact that the edge of the microtome knife was turned in cutting the sections, this plate must have formed a fairly rigid body.

The Changes in the Pia Mater.—The pia mater, not only at the attached end of the spiculum, but for some little surrounding distance (say three to four millimetres), shows the lesions of chronic meningitis, or productive or hyperplastic inflammation of the pia mater (Fig. 1, *yy*). The pia mater in the region contains an increased amount of connective tissue, which consists of fibro-blasts in different stages of development, but most of them show the more mature or final stages. The resultant thickening of the pia mater, however, is only of a moderate degree, and has not gone on to the extent of obliterating the two layers of the membrane. The inner vascular layer still presents its normal features, although in places (see right-hand portion of the pia mater in Fig. 1) the vessels appear to be somewhat diminished in number.

The meshes of the inner layer of the pia mater in the depressed region of the cortex are distended and form a network (Fig. 1, *zz*) filled with extravasated red blood-cells. This extravasation of blood, as well as some minute hemorrhages in the gray matter, seem to be of artificial origin, and are very likely referable to the manipulation in the removal of the specimen at the operation.

The Lesions of the Cortex.—The lesions of the cortex in this case might easily escape detection without the most careful scrutiny and technique. There are hardly any gross changes in the cortex which would attract attention with the low power, and it is only with the oil immersion lens that slight changes in the neuroglia cells and scattered damaged ganglion cells become fully apparent. These cortical changes are very minute and not at all striking, and yet they are none the less definite and significant.

The Ganglion Cells.—The ganglion cells are affected by a series of degenerative changes which in their most advanced stages result in an almost complete dissolution of the cell, and yet this degeneration is not extensive enough to involve the cells so universally as to interfere with their topographical distribution. Besides this, most of the damaged cells are in the earlier stages of the degeneration, so that they still retain their form and appropriate position. Thus in reconnoitring the sections with the lower powers the ganglion cells do not appear deficient in number; they are properly arranged and their several layers are perfectly distinct. The following description applies to all of the ganglion cells excepting the layer of small pyramids. For especial reasons this layer will be dealt with separately later on.

It will be convenient to describe the appearance of the nucleus and protoplasm of the degenerated ganglion cells separately. The prevailing form of nuclei shows a distinct peripheral zone, indicating the nuclear membrane: just inside of the nuclear membrane is a narrow clear zone surrounding the chromatic elements of the nucleus, appearing in the form of a skein of finely dotted interlacing filaments which show the usual thickened appearances at the nodal points and surround unstained interstices. The nucleolus is seen in most of these skein-like nuclei, and both the nucleolus and the character of the skein show no variations relating to the different degrees of dissolution of the ganglion cells. In both the early and ultimate stages of the degeneration the form of nucleus, as shown in Figs. 2, 3, and 4, remains about the same in all of the cells.

This particular form of nucleus in some of the cells is a trifle suggestive of one of the initial stages of karyokinesis, but none of the other stages of mitosis are present, so that this appearance of the nucleus must be regarded as an indication of retrogressive changes. There are no indications of mitosis in any of the ganglion cells, and this agrees with one of the latest papers on the ganglion-cell reproduction by Fürstner and Knoblauch (*Archiv. of Psych.*, xxiii., 1).

Some different appearances of the nucleus are shown in Fig. 2, in the cells *v*, *w*, and *y*. The nucleus of the cell *w* has its chromatic elements resolved into a number (some twenty to twenty-five in optical section) of larger and smaller globules or disks resembling very much the ordinary nucleolus. In the cells *y* and *v* the chromatic substance is collected into thickened strands, or large lump-like masses.

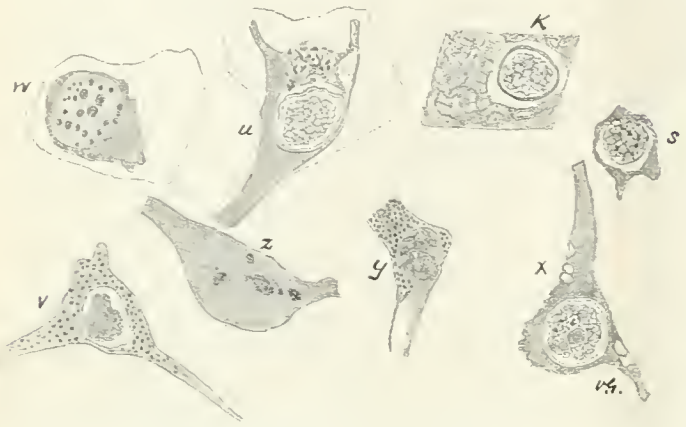

FIG. 2.—Various Phases of the Earlier Stages of the Degeneration of the Ganglion Cells. The thin lines enclosing the cells *w* and *u* represent the pericellular spaces; the cells *x* and *y* show the earliest stages, *w* and *s* later stages, and *k* shows the ultimate destruction of the whole of the ganglion-cell body, leaving nothing but the nucleus lying in an empty space.

The protoplasm of the cells shows a series of changes which finally result in an entire disappearance of the cell body—for a very complete series of intermediate stages can be observed between the slightly and most completely degenerated cells. The earlier stages of degeneration consist in larger and smaller solutions of the substance of the cell, so that hollow-looking vesicles appear in the cell body Such cells are shown in Fig. 2, *x* and *y*, Fig. 3, *x*, and Fig. 4, *a*. The cell *x* in Fig. 2 also shows a ragged or roughened profile at one margin of the cell body. These vesicles frequently appear at the junction of one of the larger processes with the cell body, as in Fig. 3, *x*, Fig. 4, *a*, or in the process itself some little distance from the cell (Fig. 4, *a*).

In a somewhat later stage, by the increase of these vesicles, and by their apparent coalescence, the cell body becomes more reduced in volume, deformed in its contours, and loses its processes. Besides the vesicles, liquefied

FIG. 3.—Other Phases of the Degeneration of the Ganglion Cells. The cell *x* shows a liquefied vesicle at the junction of two processes with the cell body and three small round cells crowded in the pericellular space; the cell *y* shows a series of liquefying seams or channels.

seams and communicating channels also appear and contribute their share toward the destruction of the cells.

A very beautiful example of these channels or seams is shown in Fig. 3, *y*. This is one of the very large ganglion cells peculiar to the deeper layers of the motor zone, and it was situated on the extreme edge of the section, so that it must have been immediately fixed by the hardening solution, and may be regarded therefore as showing very nearly the same condition possessed during life.

The cell *c*, Fig. 4, also shows a somewhat similar condition and illustrates how the apical process is being separated from the cell; the protoplasm surrounds the nucleus as a deformed or deficient mass such as is shown in Fig. 2, *w* and *s*, and Fig. 4, *b*.

In some of the degenerated cells the protoplasm at the bounding surface becomes frayed out, or loosened from the cell body in little granular islands or cord-like masses, while the remainder of the cell body may be comparatively intact. This is represented in Fig. 2, *u*, and in Fig. 4, *a*. The cell *a*, Fig. 4, is again one of the very large cells in the deeper layers, and was situated just at the free edge of the section, so that it must have been fixed in a perfectly natural condition.

In still others of the ganglion cells the protoplasm is studded with irregularly distributed shining dots. In most of the cells affected in this way, and they are comparatively few in number, these dots seem akin to and react like hyalin material, and their appearance is shown in Fig. 2, *v*, *y*. These hyalin dots are present in both the slightly and severely damaged cells (Fig. 4, *e*).

In focussing on the surface of the cell *z* in Fig. 2, some larger lump-like hyalin masses were noted.

Thus far, to the rather restricted extent that we are able to recognize them, the beginning and most limited changes in the ganglion-cell body have been described. There were larger and smaller vesicular or channel-like solutions of the substance of the cell body, and a tendency toward disappearance or separation of the processes.

We may now go on with the consideration of the final and more grossly destructive phases of the ganglion-cell degeneration. Some of these cells undergoing the later stages of the degeneration are reduced to a mere shell or skeleton of the former cell; the outline of the cell is preserved, but the cell is hollow; the bounding surfaces are intact, and enclose the nucleus lying in an empty space or

FIG. 4.—Other Variations of the Phases of Degeneration of the Ganglion Cells described in Figs. 2 and 3.

surrounded by a few shreds or granules of the former protoplasm (see Fig. 2, *k*, and Fig. 4, *f*). This condition seems to result from the extension and coalescence of the liquefaction seams and vesicles already described, and it is easy to trace the extension of the changes in the cell *y*, Fig. 3, to the cell *d*, Fig. 4.

These skeleton cells, when followed still farther in their degenerative course, show gradual dissolution and disappearance of the bounding shell, so that ultimately nothing remains of the cell but the nucleus, which lies bereft of protoplasm in the space once occupied by the ganglion cell (Fig. 2, *k*; Fig. 4, *f*).

Another way in which the ganglion cell ultimately becomes reduced to a mere nucleus is not so much by a solution of the protoplasm internally, as just described, but by a direct abstraction of portions of the external zones of the cell body. There is at first a slightly roughened surface of the cell, at some portion of its extent, with a fraying out of shreds and most minute fragments of protoplasm into the pericellular space. Then there is a tendency toward a distinct sequestration of a portion of the protoplasm (Fig. 4, *b*, *c*), so that the cell body grows smaller and smaller as the solution of its substance proceeds from without inward. Thus the cell becomes deformed and atrophied; it loses its processes, and the pericellular space sometimes contains minute fragments of the loosened protoplasm (Fig. 4, *c*). Ultimately the cell becomes reduced to a naked nucleus lying in the

pericellular space, as just described (Fig. 2, *k*; Fig. 4, *f*).

Very often this wasting away of the cell body from without inward is also combined with the liquefaction vesicles and channels or other forms of degeneration in the interior of the cell body (Fig. 4, *a*).

The ultimate fate of these nuclei, bereft of the ganglion cell body, cannot be determined positively, but some of them become destroyed. The nuclear membrane and chromatin skin become disintegrated, and finally nothing is left but some fragments of the chromatin elements, surrounded by a complete or incomplete ring, which still take up the color of the nuclear dyes.

This description of the changes in the ganglion cells refers to the deeper layer of cells, and especially to the very large ganglion cells of the fourth layer, characteristic of the motor zone. The very large size of these cells renders the detection of the degenerative changes much more positive than in the other small cells. To be more certain of the ante-mortem origin of these lesions in the cells, as many as possible were selected for study in glycerine mounts at the extreme edge of the specimen, where they must have been immediately fixed in a natural condition. The spaces about these cells are small, and altogether the element of artificial changes may be more thoroughly excluded from them than in the much smaller cells.

One of the most striking features of this degeneration of the ganglion cells is the extensive involvement of these very large cells of the fourth layer. It may be that this feature is so evident from the fact that the degenerate changes are so much easier to recognize in these cells, but it would appear as if they were especially selected by the degeneration. At any rate very few of the large cells are left intact, they show quite universally one phase or another of the degenerative changes. In cutting out the fragment at the operation, the knife seems to have sliced it off just at or below this layer of cells, so that very many of them lie right at the edge of the sections. Many of the smaller cells of the third and fourth layers, however, show precisely similar degenerative changes. There are many normal ganglion cells in deeper layers, and the degeneration affects apparently, excepting the very large cells, only isolated or small groups of cells here and there, and yet the aggregate number of the damaged cells must be very large.

Still another feature about the ganglion cells remains to be described. This consists in the accumulation of clusters of from one to four or five small round cells crowded together in the pericellular spaces of both the diseased and normal cells. These cells have a very thin envelope of protoplasm, and they are generally situated at the base of the cell. These cells are not infrequently found in brains with normal ganglion cells, and which have given no symptoms, and in the present case I am unable to interpret their meaning or determine what kind of cells they are.

We may now describe the layer of small pyramids which has been held apart from the deeper layers, because the element of artificial changes cannot be as positively excluded. The small pyramids are quite universally altered, and but a very small number of natural cells are found in the sections. The nucleus, surrounded by little if any protoplasm, lies in a rather large, empty, pericellular space, as shown in the right-hand portion of Fig. 6. But just such a picture of the small pyramids as this is generally found in any cortex, unless prepared by especial methods, and is generally to be regarded as largely of an artificial character. The small pyramids are especially prone to artificial changes, apparently from their very small size, which seems to render them correspondingly liable to shrinkage. Artificial changes in this case, however, must be considered reduced to a minimum, and these alterations in the small pyramids in this case are not present in the sections of the motor cortex of an electrically executed criminal, prepared in the same way and studied along with this case as normal control sections. So that, while there may be reason in this instance for regarding these changes in the small pyramids as the results of actual disease, there is still doubt about it, and I prefer to disregard or exclude the small pyramids entirely from the larger deeper cells where the lesions are definite, positive, and significant.

The Pericellular Spaces.—There is very little to say about the lymph-spaces of the ganglion cells. They show no striking changes and are not enlarged. The space about the deeper cells fits fairly closely, and the relation of the cells and spaces is especially well preserved. The spaces of many of the degenerated cells appear very large, but this effect is produced by the atrophy of the enclosed cell.

The basement substance of the cortex, consisting, as it does, largely of the processes of the ganglion cells, must contain changes corresponding to the degenerated and destroyed ganglion cells, but such a lesion is entirely too subtle to be recognized at present even with Golgi's methods. Some of the larger isolated processes in the basement substance show with the very highest powers an irregularity of outline of the process. These processes show minute nickings or a jagged outline of the edges. In one such process a clear vesicle was found like those described in the bodies of the degenerating ganglion cells (Fig. 4, *a*).

As regards the distribution of these ganglion-cell changes, they are not especially concentrated about the region of the foreign body, but are scattered all through the sections, even to the lateral boundaries.

There is no positive support for making statements about the duration of the ganglion-cell degeneration, but the impression is conveyed that the process is an exceedingly slow and gradual one. The cells do not show the swollen and other appearances of rapid degeneration such as are seen in the acute processes of the spinal cord. It seems probable that these damaged cortical cells may persist for a long time in the earliest stages of degeneration before advancing to the later or final stages.

The Changes in the Neuroglia.—There is a limited and very early stage of hyperplasia of the neuroglia tissue. This statement, however, can be better relied upon if the excessive difficulties attending the detection of this stage of a slowly growing neuroglia-hyperplasia are indicated. The neuroglia cells appearing in ordinarily stained sections as small round cells, are very profusely scattered throughout all of the cortical layers except in the barren layers, and their true form is only apparent by Golgi's methods. Then again, these cells are irregularly distributed, and vary somewhat in different cortical regions. In some layers they are very thickly aggregated together, and in other layers more sparsely arranged. Thus in this diffusely arranged tissue, without contrast to the surrounding tissues, in determining a slight increase of newly formed neuroglia cells which look exactly like their surrounding progenitors, we often have an insoluble problem. When the young neuroglia cells have become more mature, and possess a larger cell-body with beginning branches, a new difficulty arises in their identification, for frequently they cannot be distinguished from the surrounding ganglion cells of the same size. So the earlier diffuse increase of neuroglia is unfortunately liable to escape recognition until the process has become fairly extensively developed.

Notwithstanding these difficulties, there are a few places in the sections which show quite distinctly clusters of an increased number of very young and seemingly proliferating neuroglia cells. These are most distinctly seen in the layer of small pyramids. In a few places in this layer there are groups of small round cells which, although not sharply circumscribed, are still so closely aggregated that they stand out more clearly than the remainder of the rather sparsely distributed neuroglia cells of this layer (see Fig. 5). The contrast of the barren layer is also an aid in distinguishing these cell groups. These cells are often arranged in groups of twos or ill-defined strings of four to six in number. In two cells

only were positive evidences of mitosis discovered, and these are shown in Fig. 5, *a*, and more highly magnified in Fig. 7, *b*.

In the deeper layers there are some similar groups of increased neuroglia cells, but they are much less clearly defined. Thus the production of neuroglia in the deeper

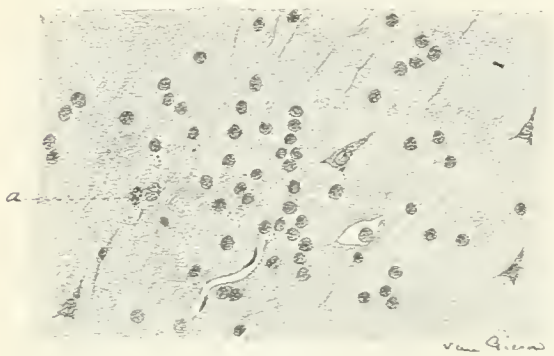

FIG. 5.—A Group of Young Neuroglia Cells Situated in the Layer of Small Pyramids.

layers is hidden from view, because the normal neuroglia cells are so thickly aggregated that the newly formed cells cannot be distinguished from them. In one single instance in all of the sections, a cluster of neuroglia cells on the edge of the specimen, in the deeper layers, was quite circumscribed from the surrounding cells and grouped differently, and seemed to be a cluster of proliferated young neuroglia cells. These young neuroglia cells at first seem to be indifferent cells. They have a thin, spherical envelope of protoplasm, which at first appears to have no processes.

At a later stage of development the protoplasm increases in volume, and they lengthen out into spindle- or oval-shaped masses and send out branching processes. Groups of these more mature neuroglia cells were also found in the sections, and they could be identified most clearly in the layer of small pyramids, because here there was no doubt of mistaking them for small ganglion cells, for the small pyramids were so universally and thoroughly shrunken (see Fig. 6). If there are other groups of these more mature neuroglia cells in the deeper layer, they cannot be distinguished plainly because of their close resemblance to the small or polymorphous ganglion cells.

Fig. 7, at *a*, shows this difficulty of distinguishing newly formed neuroglia cells from ganglion cells. These two sets of cells seem to be neuroglia cells: they have large, glassy cell-bodies, and suggest a phase of cell division. Both of these two groups of neuroglia cells were found among the larger ganglion cells of the fourth layer, and

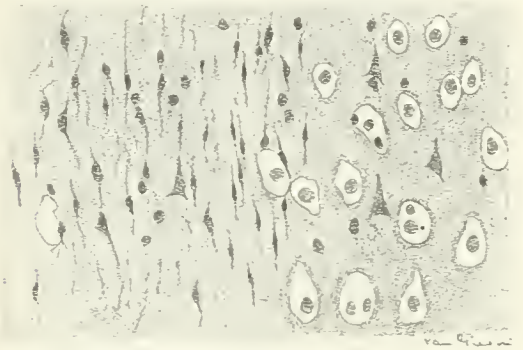

FIG. 6.—A Group of more Mature Neuroglia Cells in the Layer of Small Pyramids. This illustrates the next stage of development of the neuroglia cells from the group in Fig. 5.

are significant in evidencing an overgrowth of neuroglia in this important layer of the motor zone. Finally, in a single instance, a very large mature branching neuroglia cell was found in the deeper layers, as shown at Fig. 7, *c*. Lying alongside of this large spider cell are the remains of the nucleus of a degenerated ganglion, which may, perhaps, convey a suggestion as to the destiny of the previously described small round cells crowding the spaces of the ganglion cell, but there is no real evidence to show that the small round cells in the ganglion-cell spaces ever become large spider cells.

There is then an increase of neuroglia in these sections, and it is of a very early and limited stage of development, and yet the impression is conveyed that only a portion of this growth is apparent in certain favorable situations, as in the narrow layer of the small pyramids. Still there are several indications of neurogliar growth in the deeper layers, as, for example, in Fig. 6, inviting the belief that the process is not limited to the region where it may be recognized most easily, but is a diffuse growth and involves the layers beneath the small pyramids, but possibly to a less extent.

The *neurogliar hyperplasia* is *irregularly distributed* throughout all of the sections, even at a distance from the foreign body, and often occurs in spots or patches. Most of the sections of the depressed region of the cortex show a slight concentration of the neurogliar growth as young, small, round cells, or more mature spindle-shaped cells, scattered about among the lesser pyramids.

This growth of the neuroglia, like the degeneration of the ganglion cells, seems to take place very slowly.

The blood-vessels of the *cortex* are normal in structure, but in places they are not properly arranged. In places anastomosing net-works of capillaries penetrate the cortex from the pia mater, and, accompanied by and surrounded by more or less neurogliar increase, appear as wedge-shaped areas in the section. This is shown schematically at *z*, Fig. 2.

Microscopical Examination of Case II.—In this case there is a development of rather a large mass of connec-

FIG. 7.—Neuroglia Cells from the Deeper Layers of the Cortex. *a*, Indicates two neuroglia cells which seem to be in the process of proliferation; *c*, is a large mature branching neuroglia cell lying alongside of a degenerated ganglion cell which has dwindled away, leaving nothing but an indistinct nucleus; *b*, two young neuroglia cells showing karyokinetic figures; these are the cells indicated at Fig. 5, much more highly magnified.

tive tissue which has altered very materially the structure and topography of the convolutions which it has grown into. In this way the gray matter at the seat of the operation has been irregularly replaced by connective tissue, and has been rather largely converted into neurogliar tissue.

The removed portion was a flattened disk and measured about two ctm. in diameter, and was from five to seven mm. thick: it was hardened in strong alcohol, and

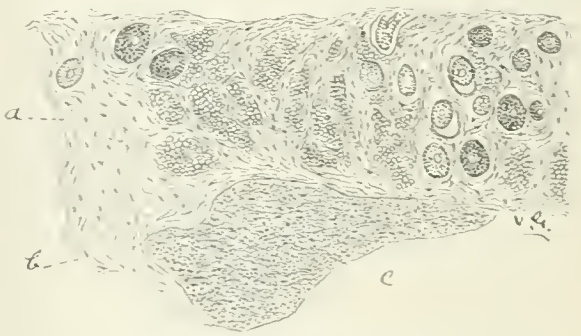

FIG. 8.—A Section through the Scalp in Case II., and Degeoerated Cortex beneath, Showing their Loose Attachment.

the celloidin sections were stained in the same way as in the preceding case.

The specimen consists of two layers, an outer layer of connective tissue and beneath it a layer of damaged cortex. At one side of the specimen a new layer makes its appearance, from the fact that a bit of the scalp is adher-

ent to the specimen and has been removed with it. Throughout the remaining extent of the specimen the scalp is absent, and the connective-tissue mass referred to is the outermost layer. Sections from the region of the specimen where the scalp is attached show the appearances in Fig. 8. The scalp (*a*), with its clusters of fat-cells and obliquely cut hair-follicles, covers and partly surrounds a bit of damaged cortex (*c*). The scalp shows atrophic changes of a moderate degree, and the attachment to the brain is rather a loose one. The brain, in this particular part of the specimen at any rate, simply lies against the scalp rather than being attached to it, and there are no blood-vessels passing from the one to the other.

A tongue-like projection of rather dense connective tissue (Fig. 8, *b*), passes inward from the scalp at one place—just at the edge of the specimen—and tends to partially surround the degenerated fragment of the cortex. This tongue-like mass blends with, or is perhaps a portion of, the extensive lamina of connective tissue forming the upper layer throughout the rest of the specimen (see Fig. 9).

The bit of cortex lying underneath the scalp is very extensively changed. The ganglion cells are severely degenerated, many of them are reduced to mere hollow shells or skeletons surrounding the nuclei, and many others must have disappeared entirely. There is also a very perceptible increase in the size and number of the neuroglia cells. Both of these changes have reached such advanced stages that there is no difficulty attending their positive recognition.

Sections through the centre of the specimen show in a general way masses of dense connective tissue which encroach upon and cause material changes in the convolutions, as depicted in Fig. 9. Such a section from the centre of the specimen shows three convolutions, *A*, *B*, and *C*, two of which are involved by the connective-tissue growth, while a third, *A*, has escaped this encroachment.

The convolution *A*, although uninvolved by the connective tissue growth, and retaining its proper form and volume, is yet considerably changed. The ganglion cells are fairly extensively affected by various phases of a series of degenerative changes. Very many of the cells show the earlier and less well-pronounced stages of the degeneration, while a lesser number show the more extensive changes in the cell-body tending toward complete disintegration of the cell, as described in the previous case. Altogether the degeneration of the ganglion cells in this convolution is so well marked as to do away with the difficulties attending the recognition of the very early stages of the same process.

The neuroglia of the gray matter do not seem to be increased to any appreciable extent, but the white matter (*x*) is quite extensively involved by a growth of spindle shaped and branching neurogha cells. At the apex of the convolution this neuroglia increase extends a little distance into, or seems to follow the passage of, the nerve-fibres into the gray matter.

In the convolution *B*, the dense growth of connective tissue appears, hollowing out the apex of the convolution, and in many places at its junction with the gray matter fashions the latter into curious little islands or tubular plugs (Fig. 9, *z*, *z*, *z*) often more or less surrounded by connective tissue. The brain tissue of the convolution *B* shows a tendency to become converted into neuroglia tissue, especially in the regions *z*, *z*, *z*, where it consists entirely of neuroglia cells with their branching and tangled processes. In the other portions of the convolution there are quite a few degenerated ganglion cells scattered about among the proliferating or much increased neuroglia elements, so that the rest of the entire convolution is extensively damaged, and the gray matter cannot be distinguished from the white matter except by the presence of the degenerated ganglion cells.

In the convolution *C*, there is a still greater production of connective tissue and a corresponding diminution in the substance of the cortex. At (*u*) the plane of the section has cut the insulated masses of the cortex lengthwise,

FIG. 9.—From a Section through the Centre of the Removed Portion, Showing the Distribution of the Dense Connective-tissue Masses which Replace Portions of the Convolutions. The convolution *A*, while retaining its normal shape and volume, shows extensive minute structural changes; the convolution *B*, partly replaced by connective tissue, is very extensively damaged in the remaining portions by the neuroglia hyperplasia; at *z*, *z*, *z* the cortex is converted into single or clustered islands of neurogha tissue; *V* indicates a region where the cortex, converted into neuroglia tissue, is disintegrating and liquefying. The convolution *c* is still more extensively involved by the growth of connective tissue, and at *u* and *w*, again shows the conversion of the cortex into insular masses of neuroglia.

so that they appear as rather short convoluted cylinders. Some of these cylinders or plugs persist, completely isolated in the dense connective tissue, as little islands of neuroglia tissue (see Fig. 9, *w*).

When the process of insulation of clustered or isolated masses of the cortex is examined with more detail, in a section at the junction of the connective-tissue masses with the cortex, the features shown in Fig. 10 (taken from the convolution *B*) are presented. In such a section four tolerably distinct layers may be recognized. Proceeding from without inward toward the brain, there is at first the very thick extensive layer of dense connective tissue which has already been topographically studied in the preceding paragraph. The first layer is apparent in Fig. 10 at *a*. It is composed of ordinary connective tissue, rather densely arranged, with its fibre bundles interlacing and running in various directions, and contains very few blood-vessels. The second and next layer is a vascular zone and lies immediately beneath the preceding layer. It is composed of a congeries of thin-walled vessels, which give the impression that many of them are newly formed. This second layer is shown in Fig. 10, at *b*, *b*, *b*, and *c*. Still proceeding inward, the third layer, *d*, *d*, *d*, is the one which consists of the clustered or discreet islands and plugs of neuroglia tissue. Finally, the fourth and last layer is the compact substance of the brain, *e*, *e*, which has its neuroglia much increased, and its ganglion cells quite thoroughly replaced or degenerated. In fact, this fourth layer represents brain cortex largely converted into neuroglia tissue.

Now, the third layer of the insular masses seems in great part, if not entirely, to owe its origin to the agency of the newly formed vessels of the second or vascular layer. These thin-walled vessels appear to pass into the compact brain substance, and by anastomosing with each other and by sending off secondary offshoots, surround little island-like masses of the brain which has already been largely converted into neuroglia tissue. In Fig. 10, at *f*, the early stages of such a process can be observed. Here are delicately walled small vessels or capillaries growing into the brain, and by the course they pursue and by their tendency to unite with each other, they exclude little island-like masses of the cortex.

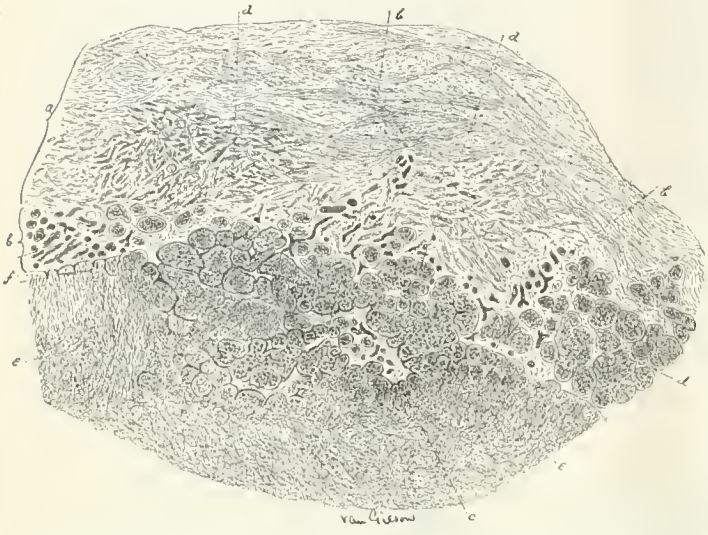

FIG. 10.—(From the Convolution *B*), shows a more detailed view of the formation of islands of neuroglia tissue from the changed cortex at the junction with the connective-tissue masses, and consists of four layers, viz.: *a*, layer of dense connective tissue; *b*, *b*, *b*, vascular layer; *d*, *d*, *d*, and *e*, layer of clustered neuroglia islands; *E*, *E*, the compact cortex, largely converted into neuroglia.

Thus the layer of insular neuroglia masses seems to be formed from the compact brain by a peculiar segregating action of newly formed blood-vessels. It is further to be noted that, following quite universally the layer of insular neuroglia masses, there is always this vascular zone, intimately associated with them, and it lies between the dense masses of connective tissue and the islands. So the capillaries seem to determine the separation of neuroglia masses from the changed solid cortex, and mould them into tiny islands or short cylinders (Fig. 11). In Fig. 11 (taken from the region *C*, in Fig. 10) a still more detailed exposition of this relation of the vessels to the neuroglia islands is presented. Here the capillaries, one of them collapsed at *y*, *y*, are seen surrounding the plugs and islands. But at *x*, *x* is shown a stage of subdivision of one of these islands by a solid protoplasmic offshoot of a capillary destined to become hollowed out into a new blood-vessel. Care was taken not to confound this solid protoplasmic process with a collapsed capillary, and it can be observed how it would divide the mass in two nearly equal parts, by uniting with the opposite capillary.

FIG. 11.—The Relation of the Capillaries to the Insular Masses of Neuroglia. *y*, *y*, is a collapsed capillary; *x*, *x*, indicates a solid protoplasmic offshoot of a capillary, which is destined to become a new vessel and subdivide one of the insular masses into two portions.

Some of these masses of neuroglia persist as isolated little islands even in the midst of dense connective tissue, as shown in Fig. 12. In such instances connective-tissue fasciculi have apparently followed the course of the capillaries and have grown about the neuroglia islands. Fig. 12 also shows very faithfully the minute structure of these islands. They consist of rather large, glassy neuroglia cells completely enveloped by their own tangled and matted process. In the mass indicated at *A*, the filamentous processes are cut vertically, and at *b*, two tonguelike processes of neuroglia pass beneath connective-tissue fascicles and fill up two inter-fibrillary spaces. The vessel *c* has a thickened or hyaline wall.

Finally, it is to be noted that the cortex, for some little distance surrounding the connective-tissue growth, is considerably damaged by a degeneration of the ganglion cells and an overgrowth of neuroglia.

Remarks.—It is exceedingly difficult to follow out the connected history of this process in Case II., without having the opportunity to study the whole of the involved territory of the brain. The rather limited material examined in the removed specimen fails to show the lateral border zones of the process, or the relations of the brain membranes, and in general the whole topographical distribution of the lesion. Thus, there is no distinct clew to the origin of the process, or to the formation of the cyst discovered at the operation. Still it may be said that this dense mass of connective tissue seems to have grown down rather slowly, apparently from the membranes of the brain, and by disintegrating portions of the brain beneath has contributed to the formation of the cyst, for there is in places distinct evidence of disintegration of the cortex beneath the overgrowth of connective tissue. If in the nature of a scar from the operation, this considerable mass of connective tissue, and its effect on the surrounding brain tissue, is very interesting in showing what may happen in the healing process of operations on the brain.

FIG. 12.—The Minute Structure of these Neuroglia Islands and their Persistence in the Midst of Dense Connective Tissue. At *a* the filaments of the neuroglia cells are cut transversely, and at *b* two tongue-like extensions of a neuroglia island fill up two inter-fibrillary spaces.

It is to the minute changes in the ganglion cells and the neuroglia that attention is more particularly directed, rather than to the grosser changes in these two cases. In reviewing Case I., these delicate and slightly marked changes on the cortex consist of a little increase in the neuroglia cells, a part of which can be seen on favorable spots only, and a gradual death of the ganglion cells. In describing these two sets of changes in Case I., it was fre-

quently remarked that these minute lesions were of a very early stage of development, and not very striking in the section. This is true as far as our rather coarse perception of them under the microscope is concerned, but when we consider the interference of the mechanism of the cortex by these lesions, they are advanced, intense, and very pronounced. Such changes as described in Case I., if transferred to a comparatively inferiorly-constructed organ like the liver, we should hardly associate them with any symptoms; but taking place in the highly-specialized brain cortex, and in the well-known motor portion, they become invested with a great importance in regard to the production of symptoms.

It does not at all convey the full import of the meaning of these minute cortical changes detailed in Case I., if we finish with them, in summing up the lesions, by simply saying that there is a slight increase of neuroglia and a degeneration of scattered ganglion cells. It is only after the reader conceives of the many initiations or modifications of those molecular changes or nervous impulses which sweep to and fro in the tangled cortical network of cell dendrites and terminal fibre arborizations, that he appreciates more vividly the true meaning of these delicate changes which appear so slightly marked under the microscope.

When we compare the second with the first case, we find the same sort of minute changes in the ganglion cells and neuroglia, in the convolutions around the lateral margins of the mass of connective tissue, and in addition, changes in the white matter of such convolutions. There is then a precisely similar condition of portions of the motor convolutions in both of these cases, consisting in minute changes in the neuroglia and ganglion cells. In the first case the condition is referable apparently to the foreign body and the trauma. In the second case the influence of the connective-tissue mass seems to have induced the condition in the neighboring convolutions.

It seems to me that this gradual death of the ganglion cells in the motor zone, especially the very large motor cells, together with the growth of neuroglia, in both the gray and white matter explains the symptoms of epilepsy very well, and much better than some of the other described changes, as for instance the lesions of the cornu ammonis, which certainly have very little causal relation to the symptoms as far as localization is concerned. Of course these are traumatic cases, but this ought not to preclude regarding this disease process in the cortex in a significant relationship to the symptoms of epilepsy. For trauma might well enough be only one of several conditions which produce this same sort of disease-process in the motor cortex, resembling somewhat a very common form of inflammation of the internal organs exemplified by chronic diffuse nephritis, which arises a variety of conditions for the most part not understood.

Nevertheless, while it is very tempting to see in these lesions a basis for the motor phenomena of epilepsy, there are not facts enough in these two isolated traumatic cases to say anything positive about this relation. Still I venture to think that such changes as described in these cases are very suggestive lines along which to work out the true lesions in idiopathic epilepsy. Idiopathic epilepsy certainly seems to be a disease of the motor zones, and it behaves like an organic disease with definite lesions behind it.

A question which presents itself in connection with Case II. is, how often do the operations on the brain cortex leave an irritating scar which tends to produce lesions in the surrounding brain tissue like those described in the convolution *A*, Fig. 9? If trephining the motor cortex for traumatic epilepsy leaves a cicatrix irritating the neighboring convolutions and changing them like this convolution *A*, the epileptic symptoms ought to return in a certain length of time after the operation.

Subacute Cystitis.—Otis recommends the injection of a mild solution of nitrate of silver till the bladder is full.

THE REMOTE HISTORY OF QUININE IN CHOLERA, WITH SUMMARY.

THIRD PAPER.

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(In the very commencement of this paper I wish to return thanks to Major J. S. Billings, Surgeon, U.S.A., and Librarian, S.G.O., Washington, D.C., for calling my attention to these earlier authorities and putting the same at my service. In my second paper I had carried the meagre later history of quinine in cholera back through the journals at my command to Botkin only, in 1871, and the hypodermic use generally. My thanks are also due to Major A. A. De Loffre, Surgeon, U.S.A., for rendering into the vernacular a number of French authorities; to Dr. A. M. Bleile, Professor of Physiology, Ohio State University, for translations of the invaluable German and Dutch writers; to Dr. Henry Liddell, Washington, D.C., for translations of Spanish, Italian, Portuguese, and Russian authorities.)

In an article entitled "A New Specific Method of Cure in Epidemic Cholera, or, more properly, Cholera-Fever, by the Antifebrile Principle of Cinchona Bark," Hanover, 1831, occurs the first mention that I have found of the use of this agent in cholera. The writer cites two physicians in India, who, in 1762, recommended "on the least remission in the cholera-fever to give bark." The anonymous author of the pamphlet suggests "that opium be regarded only as an adjuvant, the cure to be expected from quinine." His argument is theoretical only, based upon the supposed malarial character of the disease and his own experience in isolated cases of what appear to be bilious diarrhœa and cholera morbus, the author never having seen a case of Asiatic cholera.

Mr. C. Negri, London *Lancet*, February 1, 1832, commenting on an earlier case of Mr. S. R. Ensor's says: "I am strongly inclined to believe that had Mr. Ensor substituted bark for opium and brandy, his success might have been more fortunate, and I am the more inclined to this belief because it has been but a short time ago since I had an opportunity of seeing two very similar instances which presented more severe symptoms and were perfectly cured by the free administration of bark alone." Then follow two cases that appear to be tertian or quartan malarial diarrhœas, successfully treated by bark. It must not be forgotten, in this connection, that cholera was prevailing in England at the time, and that true choleraic diarrhœa often assumes an intermittent form.

Mr. S. R. Ensor, London *Lancet*, March 3, 1832, after referring to the same fatal case, adds: "Within the the last month I have seen three similar cases of a milder character, and have found the preparations of cinchona highly advantageous when a determination to the skin had previously been established. But when the surface of the body has become cold, corrugated, and dry, the bark has invariably proved emetic."

Dr. Bluff, Aix la Chapelle (*Journal Chir. und Augenheilkunde*, April, 1833), precedes his cases by a long discussion to show the relation of intermittent fever to cholera. He gives a report of seventeen cases treated by himself with quinine: two grains every fifteen minutes at first, and every half-hour after symptoms were under control for a varying period in cases that recovered, resulting in thirteen recoveries and four deaths.

He further remarks, "of these thirteen, six were the most virulent cases of cholera that could well be imagined. Of the four that died, one had had choleraic diarrhœa for four days before taking any medicine, and was in *statio mortis* when I was called. Another received the medicine regularly, but after every tablespoonful of the quinine mixture received a glass of brandy (four an hour) to take away the bitter taste," etc. (The first record of the ill effects of alcoholics in this review.) "The other two cases were amid the worst possible sur-

roundings, and only one who died was a robust young person." He further recites: "Dr. Stephen, of this city, also treated eight cholera cases successfully, giving (after an emetic) a tablespoonful every half hour of a solution of 8 to 12 grains sulphate of quinine; 12 to 16 grains alum in 4 ounces mint-water. After several hours (at most six) reaction set in and patients recovered." Twenty-five cases, all told, with 4 deaths—mortality, sixteen per cent. There occurred altogether in Aix-la-Chapelle 427 cases; 205 recovered, and 222 died. Evidently malignant cholera Asiatica, with a mortality of 51.9 per cent.

Dr. Kosser, Posen, same journal and date, after remarking on the analogy between cholera and pernicious intermittent fever, its effects upon the solar plexus of nerves, and recommending ligation of the four extremities ("which will retain 16 to 20 ounces of blood"), goes on to say, "As all medicines which had been hitherto used in cholera had done no good, I thought of the use of large doses of sulphate of quinine. . . . I used six grains of quinine with a half-grain of extract hyoscyamus every two hours in the first case." "After seeing the good effects in the first patient, who was sick to the highest degree, . . . I became bolder and gave it in the most dangerous cases every fifteen minutes, nay, every ten minutes, in the same doses. . . . With this treatment of eleven cholera cases, all affected in the highest degree, I cured ten. The eleventh, who had improved after the use of this remedy, but whom I had to leave for eight hours, I found on my return in complete paralysis, and died in forty-seven hours after beginning of disease. . . . In addition to these sick soldiers I treated five civilians in the same way, all recovering. Later, cholera invaded the Eighteenth Regiment. I saw the sick. . . . They were treated according to the experience laid down in literature. They all died, however. . . . After a few days I was called to the civilians' hospital. I found a patient in the highest degree of paralysis; he was forty years old. For fourteen hours he had had continuous vomiting and forty diarrhœa discharges. I gave him sulphate of quinine. On my return, after one hour, the vomiting had ceased, and he felt somewhat easier. He now received the second powder, and three hours later the third. Symptoms all improved, but diarrhœa not entirely controlled. I left three powders, to be given at two hours' interval. On my visit in the morning I found the bed empty. I was somewhat startled, but soon the patient came out of the kitchen smoking a pipe. Convalescence went on uninterruptedly. This case was followed by four other soldiers. They had immediately the most violent symptoms—hoarseness, vomiting, diarrhœa, ice-cold and blue extremities, intense cramps in the stomach and calves, the pulse not to be felt. These patients received every half-hour six grains quinine with one-half grain extract hyoscyamus; ligates extremities, etc. Vomiting and cramps ceased after second or third powder. Later I gave these powders in some severe cases every ten minutes, and sometimes gave two at once—powders given with coffee or wine. In a few cases violent symptoms returned in twelve to twenty-four hours (intermitting from incomplete inhibition (?), and after second to fifth day all symptoms of cholera had disappeared. During the next fourteen days I treated seven more men from the Eighteenth Regiment. They all recovered except one man." To another case of foudroyant cholera in a soldier on guard duty, he gave an emetic followed by quinine in heavy doses, with recovery. Thirty cases, with two deaths—a mortality of 6.6 per cent. only. The reckless use of hyoscyamus here would seem to disprove Hamlet's suspicions in regard to his father's "untimely taking-off" by reason of the "accursed hebbene" stuffed into his ear by his worthy uncle. In neither case could it have been absorbed.

Dr. Antonio Putelli, Venice, *Annali Universali Medicina*, Milan, 1836, "On the Use of Sulphate of Quinine in High Doses in the Cure of Cholera Morbus Asiatica administered in the Algid Stage." This author considers that cholera morbus Asiatica affects the nervous system of the "vita organica." He cites no particular case or cases. While he boasts that "he has seen his patients in a short time cured and quickly brought to convalescence," he "is compelled to admit that in the case of cholera fulminante the therapeutic described has but little effect." In the algid stage of cholera, accompanied by vomiting, and also up to six or eight hours after the disease has developed, I prescribe forty or fifty grains of sulphate of quinine, mixed with two or three grains of opium, and the whole made into five or six pills (eight grains each), to be taken every hour, diminishing the dose according to the condition, sex, individual, constitution, etc. If the first pill be rejected I give another, and a third, fourth, etc., if necessary, until retained. I have never seen more than three pills rejected, and the disease is soon tranquillized and the alvine dejections thickened." He gave the remedy to children in a mixture containing alcohol, and also used clysters of a decoction of calisaya. "On the second day I gave fifteen or twenty grains of the sulphate. . . . Such was the therapy adopted by me in many cases, amounting in four years to sixty persons of both sexes, of whom thirty-two were cured." A report very vague and unsatisfactory, but given for what it is worth. That Dr. Putelli should felicitate himself so highly upon the recovery of about fifty-three per cent. only of his cases would seem to indicate that the epidemic in Venice was exceptionally malignant. That he would have had better results if the quinine had been given in powder or in solution I do not for a moment doubt. It has not been my custom to prescribe quinine in pill form for persons suffering from serous diarrhœas since a patient in the early years of my practice commended very highly the efficacy of some quinine dragees that I had given her, because the next passage from the bowels after taking one she always heard the pill shoot into the vessel. On inspection I found her report correct. An eight-grain pill, made up with one of the old excipients, acacia or tragacanth, would, with the rapid peristalsis of cholera, ricochet down the intestinal canal, tearing through a spirillum bower here and there, and after doing some mechanical violence to that delicate exotic, be found in the stools soon after, if search had been made.

Dr. Thomas Close, Portchester, in *The Scalpel*, New York, July 25, 1849, reports one case of cholera getting well promptly on one dose of twelve grains by mouth, with a like amount, together with a teaspoonful of laudanum, given by rectal injection two hours thereafter. Many cases of dysentery and some of the severest attacks of diarrhœa (prevailing at the same time) yielded at once to twelve-grain doses of quinine.

The same number of *The Scalpel* quotes from two lectures given by Dr. C. W. Bell, on cholera and intermittent fever, Manchester, England. After discussing his very elaborate theory of the disease, he says: "If I have overrated the effect of the medicine recommended (sulphates of quinine and iron) I have not been induced to do so by theory alone, but after I had used it in many thousand cases. . . . While the epidemic prevailed in Teheran, my court-yard was daily crowded with hundreds of poor wretches praying for the love of God for a supply of the bitter water. It was served out to them in pint-and-a-half mixtures, containing twelve grains quinine, nine of sulphate of iron, and thirty drops of dilute sulphuric acid, with directions to take a coffee-cupful at a dose. . . . In some of the most remarkably rapid cures the whole was swallowed at a draught." Only short extracts from lectures are given. The title of the article in the index of *The Scalpel* reads, "Dr. Bell's Lectures on Cholera. Five Thousand Cases Cured by Quinine in India." This smacks somewhat of Marco Polo, but like the famous traveller he had doubtless seen something of that which he wrote about.

Dr. B. F. Sargent: *Philadelphia Medical Examiner*, September, 1854, in "Notes of a Few Cases of Cholera treated in the Summer of 1849, showing the Comparative

Curative Powers of Sulphate of Quinine in Large Doses," mentions that the "late Dr. Wilson" attended these cases in conjunction with himself.

This article deals only with "treatment we pursued in the collapse of cholera. . . . We say nothing of the simple diarrhœa which recovered under ordinary treatment." He refers to article in London *Medical Gazette*, 1847–48, in which Dr. C. W. Bell's treatment is mentioned as giving the clue to the use of quinine in these cases. Following this come cases treated by calomel, opium, acet. lead, quinine in small doses, chloroform, etc. He mentions the use of large doses of the remedy in pernicious intermittent fever. Then follows a narrative of cases treated by quinine, typical, unmistakable Asiatic cholera of gravest form. The dose given at commencement of treatment varies from ten to twenty grains in the course of an hour or two, either in one or two doses, usually with laudanum and brandy, and followed by smaller doses of quinine for a varying period thereafter. "To recapitulate, we have cited in all thirty-seven cases of cholera in the stage of collapse. Of these, seven were treated with calomel and opium, sugar of lead, etc., and of this number only one recovered. Four cases treated by Dr. Ayers's plan (calomel, 1 gr.; laudanum, 1 gt., every five minutes), all died; four by chloroform, camphor, or oil of turpentine, all died; three by quinine and sulphate of iron in small doses, all died; seventeen by quinine in large doses, with thirteen recoveries and four deaths; two by bleeding, both recovering. In these cases the prompt cessation of vomiting and diarrhœa and the prompt reaction are especially noticeable. Of the four fatal cases treated by quinine in large doses, one, a nurse, had been sick a week with premonitory diarrhœa—she partially reacted; another, having vomited two fifteen-grain doses of quinine, was treated with rectal injections of quinine thereafter; the third case was drunk for three days previous to the attack, when treatment commenced was thoroughly collapsed and nearly pulseless—two twenty-grain doses of quinine given; fourth case not narrated. Fatality, 23.5 per cent."

Dr. W. Strange,[1] after stating his theory of the disease to be essentially that of Dr. Bell, having treated by other means thirty-one cases with nine deaths—a fatality of twenty-nine per cent; had nineteen cases that he afterward treated with quinine, with four deaths—fatality, twenty-one per cent.

Gave only two-grain doses of quinine, with twenty drops of tinct. ferri chlor., every two or three hours; recoveries slow, the doses of quinine being too small. He notes immediate effect of quinine in checking the vomiting. Two cases that died under the treatment were intemperate. He notes that "the choleraic diarrhœa was curable by one or two doses of the quinine and iron, while they obstinately resisted treatment by stimulants, opium, or calomel."

Here comes trouble! In the leading article, *Medical Times and Gazette*, London, October 8, 1853, occurs this: "But of all remedies used during previous epidemics, with the exception, perhaps, of opium as a palliative, . . . quinine probably is most deserving of a further trial. Modern experience in India is leading to increasing confidence in its powers. Toward the close of the epidemic it was used in London. Mr. Spencer Wells injected a solution into the veins in four cases. Dr. E. A. Parkes did so in two others; all died."

As they most properly should, that method of administration being as useless in cholera as the hypodermic. In the same journal are reports of cases treated by Drs. Wells and Parkes.

Dr. J. Sappington,[2] on "Quinine in Cholera," with much selective polytherapy, gave quinine in one grain doses for consecutive fever, only—none in the cholera stage—with asserted good results. Had he given it earlier there would have been no consecutive fever.

Dr. Thomas W. Gordon,[3] Georgetown, O., in *Ohio Medical and Surgical Journal*, 1853, gives a report of eighteen cases occurring in Georgetown and vicinity in the summer of 1852. Undoubted cholera, most of the cases described being typical and severe in form. Twelve cases treated by himself and brother, by quinine and morphine, in the doses of the former of from two to ten grains, at intervals of ten minutes to six hours (*pro re nata*), recovered; of the six cases treated by others and otherwise, five died. He notes the absence of consecutive fever, but speaks of one of the fatal cases becoming intermittent before death. Elsewhere[4] he states, "I do not expect that quinine will cure every case, but believe it just as certain to cure cholera when promptly administered as it is of curing regular intermitting fever." Quinine given in powders.

C. Vianna, *Gaz. Med. de Lisbon*, February, 1856, describes a case of what appears to be malignant cholera supervening upon an intermitting febrile attack, and with a consecutive fever of similar character, recovering on quinine, eight grains in two hours, followed for several days by varying quantities of the same drug at varying intervals. Treatment at the cholera hospital, with sulphuric acid lemonade for vehicle. I insert this case more as a protest against the custom of asserting cases cured by quinine to be necessarily ague, than for any other reason.

Don Clemento Ascarza, in *El Siglo Medico*, Madrid, 1856: "Happy Results Obtained with Sulphate of Quinine Given in Large Doses in the Algid Stage of Cholera." He notices an apparent intermission in symptoms otherwise those of a grave form of cholera Asiatica. That he was on the lookout for such remissions, and that we must eliminate this "personal equation," as is done in astronomical calculations, is evidenced by his citing Torti. He gave forty-eight grains quinine in four doses, in pill form, at hourly intervals; improvement, but final outcome of first case not stated. Five other cases that had received "extreme unction" recovered under the treatment. That there were one hundred and forty-seven cases in the city and only five that passed into the algid stage would indicate either a mild epidemic of cholera or one equally mild of gastro-enteric malaria.

Dr. Vial, in a letter to the editor of *L'Union Médicale*, September, 1860, states that he used the medicine with happy results. Dose and method not given.

Here come sweetness and light, however, and it comes from the Dutch country, that Campbell has recently shown to be the source in our own land of the most of what we have been accustomed to thinking our English institutions, among which may be mentioned the equality of man; the separation of Church and State; the town meeting; the free school, and the relation of separate States to a national government. The writer's name is J. L. Pompe van Meerdervoort, "On the Treatment of Cholera Asiatica by Quinine Sulphate in Japan, *Nederl. Tijdschr. Geneesk.*, Amst., 1865. He says:

"During my residence in Japan, from September, 1857, to November, 1862, I passed through three different, fearful epidemics of cholera. In these three epidemics I personally treated 2,467 patients, all without a doubt affected with cholera; of this number 1,746 recovered and 721 died. This result is very favorable, about seventy per cent. saved, and about thirty per cent. dying, especially when one considers that in many cases I was not called at the beginning, or soon after, and that I was the only physician in a city of 60,000 inhabitants (Nagasaki), which, so to speak, would prevent a proper control of the epidemic. This favorable result I ascribe to the treatment with the sulphate of quinine." The epidemic was brought to Nagasaki by the American ships Powhattan and Mississippi from China. It came in the time of the fruit harvest, and the Japanese, according to the doctor, "eat no ripe fruits and sleep half-naked on their verandas." His first and second reasons for using qui-

[1] Letter to Dr. C. W. Bell, Provincial Medical and Surgical Journal, London, 1849.

[2] Eclectic Medical Journal, Cincinnati, 1849.

[3] Dr. Gordon had much local celebrity from having performed Cesarean section three times upon the same woman.

[4] Transactions Ohio State Medical Society, June, 1855.

nine were the prevalence before the epidemic of malarial troubles. "3d. Several of my colleagues in Netherlands India had previously used quinine in cholera with great advantage. 4th. All other recommended medical remedies had been of no avail." After recommending its use as early as possible, he goes on to say: "If vomiting is severe and continuous the remedy will not be tolerated any more, and one had better then resort to hypodermic injections, which were then, as yet, unknown to me." Very fortunately so, as had this method been resorted to, the favorable results in so large a number of cases and under the circumstances above indicated would not have obtained. He recommends in the commencement three to six grains of quinine dissolved in sulphuric ether, alcohol, and peppermint oil. "Should symptoms become worse, however, and vomiting, cramps, and abdominal pains come on with the well-known cholera excreta, then one should give, every half-hour, four to six grains of quinine, with warm bath." He uses champagne and ice for vomiting, and says, "I very seldom use narcotics, especially in large doses. . . . Often, nay, almost always, did I see distinct collapse come on in those sick to whom the Chinese doctors gave large doses of narcotics. . . . Bleeding, which was used in the beginning of the epidemic of 1858 by the Japanese physicians, usually caused immediate death. As soon as the crisis has appeared one should continue for some time the use of the quinine, as otherwise there is danger of exacerbations, during which the sick may yet die. Later, the dose may be decreased. . . . There need be no fear of quinine intoxication. . . . I saw this intoxication but three times, and warm baths, cold affusions to head, port wine, and beef-tea soon obviated these symptoms." The writer shows his theory-bias by the remark: "The use of quinine in cholera or similar malarial epidemics is to be recommended, especially in the tropics. . . . I do not wish to say that I consider it as a certainty that pernicious fever and cholera are identical."

"The cholera mixture I prescribed in Nagasaki has the following formula:

℞	Sulphate of quinine	1 drachm.
	Dilute muriatic acid	1 drachm.
	Alcoholic sulphuric ether	1½ drachm.
	Eleo-sacch. menth. pip.....	2 drachms.
	Pure water	8 ounces.

In mild cases one tablespoonful every half-hour: on improvement, every hour; in severe cases one tablespoonful every quarter hour: on improvement, every half-hour, and then in decreasing doses. After a short use of the above mixture there is usually improvement, at least if it is used in time. . . . The number—2,467—here given, pertains only to those cases treated by me personally—all severe and well developed cases of cholera—not cholerine. Of these one-sixteenth were treated in hospital, fifteen-sixteenths outside in the city. The Japanese physicians who followed my treatment obtained just as favorable results."

The hypothesis is often used as a method of arriving at accurate results in the exact sciences. Let us suppose that instead of one physician to 60,000 people, there had been the usual ratio obtaining in the United States, of one to five hundred population; that instead of a vegetable and fruit-eating population (the Buddhist priests in Japan have only in the last few years begun to frequent the butcher stalls) there had been a better fed people of a stronger vitality to deal with: that instead of seeing these cases only in the severest stage of cholera, they had been seen during the earlier stages of choleraic diarrhœa, or so-called cholerine, what an enormous reduction in the mortality might have been secured by this treatment can best be judged by the results in the Tennessee Penitentiary in 1873, of which more anon. The more exact mortality of Dr. Van Meerdervoort's cases was 29.22 per cent. W. O. Shakespeare says, "In Japan in 1854, there occurred 154,373 cases, with 101,695 deaths, a mortality of 65.8, showing the ordinary severity of the disease in Japan."

Dr. A. Schlömann[1] says: "In the cholera epidemic of the Mississippi Valley and the Gulf States, summer and fall of 1866, several American physicians obtained surprisingly good results from the sulphate of quinine. Such a coincidence might seem strange, but is explained, however, by the fact that everywhere in these States the appearance of cholera came during the time for intermittent fevers. This would tend to experimentation with quinine salts, which are the staple drugs of the Southern pharmacist. . . . Our cholera was the real cholera of the Ganges Delta and not a doubtful hybrid form of intermittent. . . . The following observations were made during the epidemic in San Antonio de Bexar, a town in Western Texas, having a population of 10,000 souls. . . . The outbreak of the epidemic was preceded by the usual endemic and intermittent fever, which, however, was not of a malignant type and was declining before the cholera came. . . . In these cases (non-febrile choleraic diarrhœas) I carried over the quinine treatment with the same unvarying good results. The constancy of success and the continued immunity of my *clientèle* in the midst of the prevailing great mortality, caused me to wonder whether this result was due to the medicine or to other accidental and unknown conditions. To find this out, I concluded to change the quinine treatment for opium, and aromatic and astringent remedies. . . . During the first half of the new day everything passed off pleasantly and the diarrhœa seemed to be checked in all cases. During the night, however, after the effect of the opium (quinine?) had passed off, diarrhœa returned in every case, and worse than before. The discharges became so threatening that I speedily returned to the use of quinine. After this day I continued the quinine treatment with the same previous good results, so that at the end of the epidemic I had come to the conviction that quinine would be, at some future day, of the same importance in the treatment of cholera as it is in the treatment of intermittent fever." (This writer had formed the theoretical opinion that quinine would do only harm in the "asphyctic" stage, and so did not give it in his worst collapsed cases.) "I wish to remark that all cases that came into treatment in the asphyctic state and all lighter ambulant cases of diarrhœa have been excluded. Under the quinine treatment 220 cholera and cholerine[2] patients recovered and three died. Mortality, 1.3 per cent." Then follows a history of these three fatal cases.

"1st. Vomited the medicine, becoming an hour thereafter 'cyanotic' and died.

"2d. Intestinal diphtheritic form with complete anuria; thirty grains quinine did not arrest disease. He died on fifth day.

"3d. A child, three or four years old, that got only five grains of quinine died."

Commenting on these three fatal cases, he goes on to say: "In regard to these three cases, which might be used as testifying against the value of the medication, the first needs no further comment. In the second the medicine was absolutely without effect. The tenesmus present makes it probable that the disease was located in the large intestine, and I regret, with my present views, that I did not give a quinine clyster. The method of treatment was always the same, with small modifications. I always carried gramme doses of quinine and a morphine solution for the purpose of hypodermic injection. The quinine was always given without delay, either in half or whole dose, and repeated after the next evacuation, or also after two or three hours if there was not a slight intoxication. Generally opium was added to this. In vomiting or nausea often a subcutaneous injection of morphine was given." Bases his objection to use of drug in the asphyctic state on the fact that he had seen "disastrous results" from using it in the "fever period of remittent or in typhoid fever,"

[1] Treatment of Asiatic Cholera by Quinine, Ber. klin. Wochenschr., September 4, 1871.

[2] German nomenclature—cholera diarrhœa, cholerine, cholera; French—cholerine and cholera only.

a doctrine hardly of universal acceptance even at that time, and certainly not now. He quotes other authorities and mentions hypodermic use of the drug.

The French authorities are of but little moment. In 1865 M. Pidoux recommended it in tonic doses — a "weak mixture," containing one-third grain of quinine to the dose; a strong mixture containing about one-half grain to the dose. Following his treatment, Dr. O. Des Broulais used it in what appears almost certainly to have been an epidemic, malarial in character, but attended by intestinal disorders, in the Valley of the Loire Inferiéure, with asserted good effects. Mention is made that these small doses seemed to have had a beneficial effect upon the vomiting.

In *L'Abeille Médicale*, 1865, Drs. Bourgogne and B. de la Grandière dispute over a case of cholera (as asserted by the former but denied by the latter) that was cured by tannate of quinine after reaction had taken place.

L. V. J. Gruzof, Process Imperial Medical Society of the Caucasus, 1871, states that "in the summer of 1866, in Abchasia Huduat, the author had charge of the cholera division of the regiment." He gives no figures, but says the death rate was small under quinine treatment. Further on he gives two mild cases of cholera (cholerine?), occurring in 1871, successfully treated by hypodermic injections of quinine. He also criticises Professor Botkin, of St. Petersburg, for using four to five grains of quinine by the mouth as "entirely inadequate and too risky;" recommends the hypodermic use instead, and finally adds, "the very small percentage of death-rate (17.3 per cent.) in the treatment of cholera with quinine in Professor Botkin's clinic and my own personal preference for the hypodermic injection method, lead me to make the present communication." It may be recollected by some that in recording Professor Botkin's results I said in my last article in the MEDICAL RECORD that had Professor Botkin given the larger doses, eight grains in solution, by the mouth, and when vomited, promptly repeated the dose instead of resorting to the hypodermic method, "he would have had still better results than the above very favorable showing."

"Truth is this to me and that to thee."

My two records meet here and contain all that is known or accessible to me pertaining to the use of quinine in cholera. When my attention was called, in the Columbus Academy of Medicine, to Stillé's summary of results on board the Belleisle,[1] in which, with varying results under other treatment, out of the number (nineteen) treated by quinine, twelve died, I stated that "I had no doubt that the hypodermic method was used." Later, in writing to the friend, in Washington, D. C., who kindly looked up the reference for me, I modified this judgment by adding, "or only the worst collapsed cases were so treated." How nearly my judgment, based on my researches at that time, came to being correct will be best shown by the following extract from the article entitled "Treatment of Cholera on Board the Belleisle."

"1st. Quinine treatment consisted in the hypodermic injection of twenty grains of quinine in solution. . . . As this plan of treatment was new, the worst cases were selected, all but two being in a pronounced stage of collapse on, or soon after, admission." It was the hypodermic method, used in the worst cases, too.

On the British flag the sun never sets, and the British drum beats round the world. Wherever that flag floats and drum beats are British surgeons to whom come these great London journals. The cases of Messrs. Spencer Wells and E. A. Parkes, experimented upon in 1853 and dying from intravenous injections of quinine, must have had their effect, as these cases were noted everywhere. In the sixties it will be recollected that the great rage for hypodermic medication was on, and here comes another failure by this "new method of treatment," and this report, too, went its rounds, undoing much of the work that had been done by these earlier writers whom I have here recorded. Strange enough, the lack of success by this method did not excite a return in any great degree to the earlier method of administration. It is my belief that the hypodermic method was more commonly resorted to in the epidemic in the Mississippi Valley in 1873 than the other by the mouth. That it was so in the city of Nashville, Tenn., I am convinced, and for the following reasons:

1st. The method was not used in the Penitentiary until the very able counsel came in from the city.

2d. Another practitioner of equally high reputation,[1] writing me, says, "I also gave quinine freely, using an ethereal solution hypodermically."

Furthermore, the number of deaths in the city—1,000—show either that there were about two thousand cases in the city, giving the usual fifty per cent. rate of mortality (the rate for this epidemic of 1873 in the Mississippi Valley being fifty-two per cent.) under other treatment, or else the death rate in the Penitentiary carried into the city would give the astonishing result of over 33,000 cases of all grades of the disease, some 5,000 more cases than there were people then resident in the beautiful capital of the brave old State of Tennessee. In this estimate I have taken the highest number of cases mentioned: "There were about five hundred prisoners and attachés at the Penitentiary, and almost every man, woman, and child there were affected with the epidemic." The number of deaths of those having medicinal treatment being fifteen, gives the rate of three per cent.

That the Penitentiary cases[2] treated by quinine were malignant cholera is evidenced by the fact that it was malignant cholera, with a death-rate of sixty per cent., before the seventy-five convicts were brought in from their camps along the railroad: that it was malignant cholera in the one of the seventy-five prisoners who received no quinine; that it was malignant cholera in the negro (McClellan, quoted by Wendt), discharged from the Penitentiary and dying in the city a few days afterward; that it was malignant cholera on the day when the physician of the prison corrected his diagnosis, changed the dietary of the sick, and presumably modified his treatment, as three died on that day; that it was *more* malignant cholera after other treatment was in part even introduced, twelve cases dying thereafter; that it was *most* malignant cholera that was introduced into the city of Nashville by these same convicts.

As to the cause of the results obtained, it was not the dietary, for that was arranged for scorbuto-malaria and not for cholera; it was not the hygienic surroundings, for two prisoners, for the most part, were in one cell with 250 cubic feet of air-space, and the slop bucket to receive the discharges within the cell; it was not the other treatment, for this had given a mortality of about fifty per cent. in previous, as it has in subsequent, epidemics; it was not faith-cure, for in Western penitentiaries they do not "batter the gates of heaven with storms of prayer."

It must have been the quinine first given, "by the mouth wholly," by Dr. Henry, and continued thereafter, with rare good sense and judgment, by the consultant, Dr. Menees, who doubtless saw the good results inuring from its use and continued it, "freely by the mouth, as well as hypodermically.

Summary.—After writing the above, I waited for a few days before completing this paper in order to hear from my translator in Washington, D. C., to whom I had written to please verify his translation in the Putelli article above quoted, as from the large amounts of quinine taken there should be a better result than the forty-six per

[1] Medical Times and Gazette, 1806, vol. ii., p. 500.

[1] I know that these Southern gentlemen will view this statement in its right bearing, analysis, not criticism. It is my belief that there are no better physicians anywhere than in Nashville, and if I am correct in my above surmise, in using this method they were following the lead of the advanced thinkers in the profession the world over.

[2] For details of epidemic in Tennessee Penitentiary, see Cholera Epidemic of 1873 in the United States, or my own article, MEDICAL RECORD, December 10, 1892.

cent. death-rate, even with the pill form of administration of the remedy. The following extracts from his reply speak for themselves: "I regret to find on reference to Putelli that there is an inaccuracy in the translation of the passage relating to the results obtained by the administration of quinine in cholera. The true translation is, 'Such was the cure by me adopted in many cases in persons aged from four years to sixty, and of diverse sex, of whom two-thirds were cured.' Mortality thirty-three per cent."

When upon the results of treatment alone I can say of Stillé's list the remedy must have been given hypodermically and not by the mouth, and for like reason in Putelli's case suggest where the translator has erred, it would seem that we had the Asiatic scourge between the hammer and the anvil, and a step had been taken by therapeutics toward a place among the exact sciences. The report of Putelli and my remarks upon the same I shall permit to stand as they are above. The pill form used will still serve to explain why the recoveries fell so low as sixty-seven per cent.

1st. In my first paper[1] are given the results of treatment of cholera by quinine, in 1873, among my own *clientèle*. The cases were few, but the end attained such as to satisfy my own mind that the remedy had a remarkable effect over the disease. In my second paper[2] the inhibitory list of Koch, with additions of Lowenthal's salol and Cantani's tannin are discussed, with amounts of these, and other remedies furnishing the inhibitory equivalents of forty grains of quinine. It is my belief that this comparison has shown that quinine is the only one of these that can be given *ad libitum ad inhibitum*. In both of these papers I pointed out the error into which the profession had fallen in giving the remedy hypodermically instead of by the mouth, the germ being inside the intestine, and the emunctory through which the drug escapes being the kidneys.

2d. As to special symptoms all authorities agree that quinine in almost all cases very shortly stops vomiting, this being remarked even by the French authorities who gave it in very minute doses. In the report of McClellan *et al.*, it is only once mentioned that the remedy was vomited.

3d. That in the few cases where the quinine was persistently vomited the patient always died.

4th. That the diarrhœa was usually checked within a few hours, rarely lasting on for a few days when the dose was large.

5th. That reaction promptly followed the cessation of these symptoms, that there was no consecutive fever, and that convalescence was rapid as compared with that resulting from other remedies.

6th. That doses at the rate of about ten grains per hour seemed usually to give as good results as larger doses, and much better, generally speaking, than in smaller amounts.

7th. That these results did not depend upon the sulphuric acid, the hydrochloric acid, or the various salts of iron with which the quinine was sometimes combined, as quite as brilliant effects came from the quinine powders alone, given by many.

8th. That the hypodermic syringe should be used only (if at all) for the small morphine injections that may be needed to control certain symptoms—pain, spasm, etc.—as in all cases mentioned where bad results were obtained this method or the intravenous was used. If bad results ever came from administration by the mouth, there is no record of the same.

9th. That the pill form should be eschewed.

10th. That the above results strongly confirm the belief that Koch's germ is the true cause of cholera; that it is confined to the intestinal tract, and that quinine, inhibiting in strength of one to five thousand, is the "quinine of cholera" that Semmola wished for but could not find.

[1] Medical Record, October 1, 1892.
[2] Ibid., December 10, 1892.

11th. It is the uniform testimony that although the remedy seems sometimes to have been given in very, probably needlessly, large doses, yet no very unpleasant effects resulted.

12th. That the objections that the disease was not cholera but malaria successfully treated by quinine;[1] that it was only a mild form of the disease which would get well under ordinary treatment, are alike set aside by the above chronicle.

13th. That the curative effects of quinine in cholera are only less certain and sure than in malaria because of the greater rapidity with which the former poison acts. The control of the remedy being as evident in the one disease as in the other.

14th. That in fulminant cases the thing to do is to fulminate the quinine more rapidly—lightning strikes up as well as down.

15th. That in cases of obstinate vomiting entero-clysters of quinine, forty to sixty grains in two or three quarts of warm water, should be made trial of. There would be an inhibitory margin for four times the amount of fluid mentioned, and some of this might be got beyond the ileo-colic valve.

16th. That after thorough quinine inhibition in collapsed cases hypodermoclyses may be made use of with a better hope that the saline solutions will not only temporarily galvanize the patient into life in order that he may again collapse when the intestinal discharges once more set in.

17th. That there is a limit in therapeutics; "we cannot make a withered palsy cease to shake," and resurrections from the dead are few, far between, and none too well authenticated. Quinine will not cure heart-clot.

The following tables seem to show about what the rate of mortality has been heretofore (the quinine having been given by the mouth):

In Japan, Collapsed and Collapsing Cholera.

	Number of cases	Deaths.	Percentage of mortality.
Dr. Van Meerdervoort	2,467	721	29.22

In Europe and America, Collapsed and Collapsing Cholera.

	Epidemic.	Number of cases.	Deaths.	Percentage of mortality.
Dr. Bluff	1831–36	17	4	23.5
Dr. Rosser	1831–36	30	2	6.6
Dr. Close	1849	1	0	0.0
Dr. Sargeant	1849	17	4	23.5
Dr. Strange	1849	19	4	21.0
Dr. Gordon	1853	12	0	0.0
Dr. Fullerton	1873	5	0	0.0
		101	14	About 14.0

Sick-abed, Cholera, Collapsed, Collapsing, and Quinine-inhibited Cholera (choleraic diarrhœa, "ambulant cases," Dr. Schlömann; "that came at sick call," Dr. Henry excluded).

	Number of cases.	Deaths	Percentage of mortality.
Cases in last table	101	14	14.0
Dr. Stephen (Aix-la Chapelle), 1831.	8	0	0.0
Dr. Schlömann, 1866	220	3	1.3
Dr Henry, 1873	350	15	4.2
	679	32	4.8

This is all I have to present. Were it a gun warranted to kill two hundred thousand men in one campaign, and wounding as many more, I would have no doubt as to its prompt recognition in Europe. Were an enemy's fleet to "sail yonder round by the hill," or an armed universe set foot upon our shores, how quickly would we spring to arms! how soon be heard the old war refrain, "We are coming, Father Abraham," four or five millions more! That sound as "of a trumpet on before" would penetrate the "dull cold ear of death," and from Maine to Texas all but rouse the sleeping heroes in the "bivouacs of the dead."

[1] The germ-test cannot be made retroactive. What method of diagnosis was pursued in the cases from which Koch first obtained his comma bacilli?

Of course thus far this defence against the pestilence has been but sharp-shooting, or at the most squad or platoon firing here and there, for sixty years. But wherever this resistance has been made, effective work has been done. Let us suppose that instead of this desultory method, when again the foe is among us, we attack in force all along the line, an army of life-savers, seventy thousand strong, from the Lakes to the Gulf, Union and Confederate. If, after one charge of this sort we do not gain a victory over this death, and plant the American flag on the last of the major universal epidemics, there is no use reasoning in therapeutics either before or after the event.

But heroics are for war, not for pestilence; for slaying, not for saving alive; for gunpowder, not for quinine.

THE OCCURRENCE OF ANGINA PECTORIS AND EPILEPSY IN VARYING FORMS IN THE SAME SUBJECT.

With a Brief Consideration of the Alleged Identity of these Maladies.[1]

By RICHARD C. NEWTON, M.D.,

MONTCLAIR, N. J.

LATE CAPTAIN AND ASSISTANT SURGEON UNITED STATES ARMY.

F. B——, aged forty-five, single; American; General Service Clerk United States Army. Treated in the United States Army Recruiting Depot Hospital, David's Island, New York Harbor.

Family History.—B——'s father lived to old age and died of some kidney trouble. His mother died in childbed. Of several children B—— was the only one that reached maturity. No history of any nervous or other hereditary taint could be obtained.

Previous History.—B—— denies any serious illness in his life until two or three years before coming under my observation. He was an intelligent and well-informed man, and had the appearance and manners of a gentleman and a man of the world. He was a General Service Clerk; that is to say, a man of especial capacity as a clerk, enlisted expressly for the higher class of clerical work in the army. He had always borne an excellent character. His principal failing was a fondness for ardent spirits, in which he indulged pretty freely, but generally managed to perform his duties acceptably. At the time I first saw him he had served in the army nearly thirty years. He had contracted a chancre six or eight years before this history begins, which had been followed by non-suppurating buboes, a large cervical abscess, and osteocopic pains. He could not recollect any cutaneous manifestations.[2]

For his syphilis B——was treated in the United States Naval Hospital at Brooklyn, N. Y. Shortly after I had reported for duty at David's Island, in November, 1887, B—— brought me a note from Dr. H. S. Oppenheimer, of New York, requesting me to apply a gentle galvanic current to the muscles of B——'s left eye. B—— was suffering from divergent squint and ptosis on the left side, and had been under Dr. Oppenheimer's care. He was taking pills of the protoiodide of mercury, and twelve or fifteen grains of the iodide of potash daily. The latter drug had to be frequently intermitted on account of the diarrhœa which it excited. Dr. Oppenheimer's idea in the application of the galvanic current was to stimulate the ocular muscles, especially the internal rectus, and if this should evince more tone than it then seemed to have, the doctor intended to do a partial or complete tenotomy to the opposing external rectus, with a view of straightening the eye. This treatment was carefully followed out, three applications being made weekly, but no effect was observed from it.

B——'s case then came entirely under my care. I found that for two or three years the man had suffered from occasional attacks of angina pectoris, the attacks of which were sometimes at least traceable to sexual intercourse or some unusual excitement. There was a loud, blowing, double-heart murmur and considerable enlargement of this organ. The patient was pale and somewhat anæmic, but not emaciated. He was able to do his clerical work, wearing a ground glass over the squinting eye. He had a paronychia, which was exceeding difficult to cure, but which finally yielded to the use of chrysarobin.

About February 1, 1888, B—— had a typical attack of angina pectoris, which was not affected by morphine hypodermically, but quickly yielded to inhalations of amyl nitrite. B—— was prostrated for several days after this attack, probably from the morphine which had been administered, since his next attack of angina, in which no morphine was used, was not followed by sickness or prostration. On July 1, 1888, B—— had two severe epileptic convulsions, about half an hour apart. After the first convulsion the heart stopped beating. Respirations were also suspended, the extremities were cold, the surface was covered with a clammy perspiration, and to all appearance B—— was dead. Inhalations of amyl nitrite, heat to the extremities, and vigorous rubbing were followed after a time by gasping and shallow respirations. The heart started with a jerk, and then the beats became regular. Instead of coming out of his state of coma, he went into another well-marked epileptic (grand mal) convulsion, with its customary clonic and tonic spasms, after which he slowly regained consciousness. It was some time before he could realize where he was, etc. He was sent to the Depot Hospital, and underwent a prolonged course of treatment. He cannot be truly said to have ever been as well after these two seizures as he was before. His urine was carefully examined on several occasions, and the daily quantity noted. The specific gravity was 1.010 to 1.020; reaction, alkaline; odor, offensive; appearance, turbid; albumin, abundant — about one-third of the amount of urine by volume. By the microscope were seen triple phosphates, oxalates, amorphous urates, and a few granular and small hyaline casts. The urine improved in appearance under treatment, and the amount of albumin diminished so that in one or two specimens it was absent. The reaction became acid, and the odor natural. Daily quantity, about forty ounces.

The patient was put into a private room, and every attention was shown him.[1]

The heart's action was weak and irregular. Infusion digitalis was employed up to the point where the stomach refused it, or it excited the ever-sensitive bowels to diarrhœa. The diet was carefully regulated. Bromide and chloral, alternating with Dover's powder, were administered for the extreme nervousness and night terrors. Several mild attacks of angina pectoris supervened, and were easily controlled by inhalations of the amyl nitrite.

B——, in common with most hard drinkers, had piles which easily bled and were the cause of much discomfort. For two weeks the treatment above outlined had been carried out, supplemented by complete rest and quiet. B—— began to improve. The cardiac action was better, and the murmur less distinct. The urine also improved in character. As the severity of the symptoms already noted began to diminish, sciatic neuralgia, especially on the right side, appeared, together with numbness of the right hand and forearm. As the paralysis of the ocular muscles was on the left side, the symptoms in the right arm and leg would point to a cranial lesion above the decussation of the nerve-fibres in the pons, or to multiple lesions.

The patient, like other epileptics that I have observed, was very reticent; and only by patience and perseverance could I extract from him, a portion at a time, the history of his case. He acknowledged sciatica, chiefly on the right side, for two or three years, and that for a similar

[1] Read before the Society of the Alumni of Charity Hospital.

[2] Hare and others call attention to the fact that syphilitic epilepsy generally occurs in subjects who have not shown the eruptions of the disease.

[1] Steward Mead and Acting Steward Foster, U. S. A., deserve credit for their unremitting care of this troublesome case.

period he had gotten up several times at night to make his water.

In order to hasten if possible his improvement, the galvanic current was ordered applied as a general nerve tonic and to mitigate his sciatic pains. During this time the anti specific medication had not been intermitted. Daily inunctions of blue ointment were practised, and the iodide of potash given as freely as his irritable bowels would allow.

The applications of galvanic electricity had to be discontinued after the third sitting. Their effect upon B——'s mind was remarkable. He grew suspicious, morose, and fractious, refused his medicine, because he alleged that it was poison, etc. After the last application of the battery he ran down-stairs from his private room on the second floor of the hospital, and spent the night in one of the wards. In the morning he was greatly astonished on waking up to find himself in the ward, and seized his clothes and hastened back to his room without much ceremony.

The electrical treatment having been discontinued, in another week B—— seemed much better, his intellect was unclouded and the general condition was encouraging. His principal complaint at that time was of pain in the right arm and leg. The muscles of these extrémities were weaker and the surface less sensitive to the æsthesiometer than those of the left side. No change was noted in the ocular muscles of the left side, the squint and ptosis remaining about the same as when I had first seen the patient nine months before.

The neuralgic pains seemed to bear some relation to B——'s other troubles, disappearing as the latter appeared, and *vice versa*. Of course it may have been that they would always have been present had they not been masked by the more strenuous conditions. The patellar reflex was tested and found to be greatly exaggerated.

About six weeks after the two epileptic convulsions above described, which, so far as I know, were the only well-marked grand mal seizures which B—— had ever suffered, B—— began to exercise somewhat by walking in the open air. As I was sitting one day in the office at the hospital, B—— passed by the door and stopped for a moment, when he saw me. I addressed him, when in an agitated manner he muttered something quite indistinctly and walked very rapidly out of the hospital and across the parade ground. I was astonished at the speed with which he walked, and sent two of the attendants after him. He was not conscious of what he was doing nor where he was. The attendants were told not to use any violence, and to wait until B—— was ready before leading him back to the hospital. In a few minutes he recovered himself, and came quietly back with the attendants. As I had not seen B—— walk any distance before for some weeks, I was interested in observing whether or not he dragged his right leg. This he did not do. But he seemed to have lost in a measure the use of his right hand. The performance just related, and the previous running into the ward and spending the night there, were evidently attacks of epilepsy procursiva.

In September B—— was sent into the country and remained away three or four weeks. He continued his inunctions of blue ointment and took as much iodide of potash and cod-liver oil as his weak digestion would allow. He had learned to subsist mostly upon milk. After B——'s return from the country he resumed his duties in the adjutant's office, doing a small amount of work himself and directing the work of the other clerks. He said that he felt well when he woke up in the morning, but that toward noon he would feel "queer" and would not know what was the matter with him. He developed a paronychia on the ring-finger of the left hand, similar to the one which had troubled him in the winter. This was also quite intractable; but finally yielded, as its predecessor had done, to chrysarobin.

In November, 1888, I left David's Island and lost sight of B——. He died suddenly, February 22, 1889, thirteen months after first coming under my care. A partial autopsy was made by Assistant Surgeon A. E. Bradley, which revealed great hypertrophy and some dilatation of the heart. The organ weighed twenty-eight ounces. There was considerable disease of the aortic valves, which were incompetent and thickened and altered in shape by atheroma. The muscular structure of the heart-walls "showed light-colored striæ, signifying a probable former myocarditis." The aorta was dilated and showed calcareous deposits on its walls. Pleural cavities show some old adhesions. Small mass of apparently cicatricial tissue at right pulmonary apex. In the abdomen extensive old adhesions were noted over most of the peritonenum, especially in the splenic and hepatic regions. The liver was enlarged and congested, and showed signs of old hepatitis. Spleen enlarged and congested. Its substance was soft and friable. Kidneys enlarged and congested, capsules adherent. Brain and spinal cord not examined. Intestines and stomach not examined.

I have given this history with much, and perhaps tiresome, detail. To me, at least, it was exceedingly interesting, and many questions have presented themselves in regard to it. Perhaps the first inquiry which naturally comes up is, 1, Were the different nervous phenomena in this case all due to the same cause? in other words, 2, were they in reality only different phases of the same constitutional state? It is a thousand pities that no post-mortem examination of the brain and cord was made. It seems fair to assume, however, that a gross cerebral lesion, probably a gumma or gummata, existed of which the ptosis and strabismus were symptoms, as well as the anæsthesia, paresis, and neuralgic pains of the right limbs.

What the underlying trouble with the entire nervous system was may afford room for doubt. The impression which a prolonged study of the case made upon me was that syphilis, with alcohol for its congener, was to blame for B——'s many afflictions. Whether there had been present a syphilitic myocarditis I leave to better judges to decide. It seems, however, that the atheroma of the endocardium and aorta had its start in syphilis and was aggravated by alcohol. Although I carefully inquired, I could get no history of rheumatism independent of the syphilis. We must not forget that uræmic poisoning probably played its part in this complicated case.

As to the identity of the various nervous phenomena, I confess my inability to decide. The condition of the heart itself would, it seems, account for the angina, and perhaps for the epilepsy, both grand mal convulsions, and the epilepsy procursiva, but it could hardly have caused the ptosis and strabismus and partial right palsy, except, of course, by an embolus. And this hardly seems as likely as that the syphilis, with which the man was saturated, had caused a gross cerebral lesion. It is fair to assume that the epileptic explosions and the angina became gradually milder from the prolonged anti-specific treatment. But the mental state grew gradually weaker, perhaps from cerebral anæmia due to the increasing incompetency of the heart.

As to the alleged identity of epileptic fits and attacks of angina pectoris, so respectable an authority as Trousseau declares that both conditions are due to the same cause; in other words, that angina is a form of epilepsy. Gairdner, Bartholow, and others seem to share this view, although Hare in his recent brochure, "Epilepsy, Its Pathology and Treatment," does not mention it. Bartholow says "it (angina) is, as Trousseau first pointed out, sometimes a masked epilepsy, and angina pectoris may alternate with epileptic attacks."

A great part of the fascination which the study of the pathology of nervous diseases presents to the inquiring mind seems to be its inherent obscurity. A dark, difficult, and winding road lies before the neurologist, and no doubt its very difficulties and uncertainties, its pitfalls and false beacon-lights only incite the searcher after truth to more earnest effort and more careful study.

As to Trousseau's allegation, it is exceedingly hard to affirm or deny it until the true nature of the disorders

mentioned has been ascertained. If similar things only are susceptible of comparison, it would seem that the principal characteristic which angina and epilepsy have in common is the uncertainty by which they are surrounded. Their real cause not being known, it is begging the question to declare that they are different manifestations of the same constitutional state. Dr. Hare frankly acknowledges, in the work already spoken of, that the ultimate nature of epilepsy is entirely unknown, and Strümpfel says the same thing of angina. This, of course, is not to say that certain conditions may not produce these phenomena, for we know that they do. It is, however, idle to dogmatize upon this subject, as Potain and other writers have done, and such a method of studying pathology is, fortunately, becoming obsolete. In nervous diseases especially, the clinician and the pathologist must join hands, and faithfully, carefully, and with minds free from bias, work out the difficult and intricate problems which present themselves, some of which I have alluded to to-night.

The careful study and accurate record of the symptoms of a large number of cases seem nearly if not quite as necessary to the establishment of a knowledge of the pathology of nervous diseases as are post-mortem examinations and laboratory and microscopical investigations.

Progress of Medical Science.

The Irregular Heart.—At a meeting of the Medical Society of London, Dr. Sansom read a paper on the above subject, based on an observation of forty-seven cases presenting pronounced cardiac irregularity for long periods, all of them being independent of structural disease of the heart. They were considered in two groups, the smaller being made up of ten cases of Graves's disease. The associations of cardiac irregularity in the larger group were: 1, Dyspepsia; 2, syphilis; 3, osteo-arthritis; 4, disturbances of the sense of hearing and naso-pharyngeal affections (illustrative cases were given under this head which tended to show that a reflex from the naso-pharyngeal tract and from the neighborhood of the auditory mechanism was often a potent cause of cardiac irregularity); 5, influenza (instances were given of special forms of arhythmia due to the disturbance of the nervous mechanism by this cause); 6, mental disturbances and the effects of severe nervous shock; 7, cases without notable associations (these were parallel with those cases of rapid heart which showed no notable morbid alliances). The author submitted that all forms and degrees of irregularity, from the slight to the most pronounced, were to be ascribed to disturbances of the nervous mechanism of the heart. The cases without notable associations might point the lesson that while the central disturbance from which the other affections of Graves's disease were offshoots brought about in the majority abnormal rapidity of the heart's contractions, in the minority it induced irregularity. So in many instances arhythmia cordis might be considered a *forme fruste* of Graves's disease, only it was better to express it that the *ensemble* of the phenomena of Graves's disease was due to the extension from the area of disturbance, which was focally that portion of the nervous system which was concerned with the regulation of the heart's movements. In all such cases, whether manifesting tachycardia or arhythmia, outbreaks of dyspnœa or of gastro-intestinal disturbance—vagus storms, as he had termed them—were frequently observed. It seemed probable that while sudden overstrain was more likely to produce a tendency to morbid acceleration, the more chronic forms of mental depression tended to be associated with irregularity.—*American Journal of the Medical Sciences.*

Bloodless Amputation at the Hip-joint.—Dr. Senn has described a new method, devised by him, for the bloodless amputation of the hip-joint (*Chicago Clinical Review*). The following conclusions are presented by the author, as embodying the advantages of this operation: 1. Preliminary dislocation of the head of the femur and clearing the shaft of this bone of all soft tissues down to the proposed line of amputation through an external straight incision requires less time, is attended by less hemorrhage and shock than when this part of the operation is done after circular amputation, as advised by von Esmarch and others. 2. The external straight incision is the same as the von Langenbeck incision for resection of the hip-joint, differing only in length. 3. After dislocation of the femur the soft tissues are tunnelled with a hæmostatic forceps which is entered through the external wound on a level with the trochanter minor to a point on the inner aspect of the thigh behind the adductor muscles and about two inches below the ramus of the ischium, where a counter-opening two inches in length is made. 4. Bloodless condition of the limb should be secured by elastic compression or vertical position prior to tying the elastic constrictors. 5. An elastic tube three-quarters of an inch in diameter and about four feet in length is grasped with the forceps in the centre and drawn through the tunnel made by the forceps. 6. After dividing the elastic tube in the centre the base of the thigh is constricted by drawing firmly and tying the anterior constrictor in front of the anterior section, while the posterior constrictor after being drawn tight behind the posterior section the two ends are crossed and then made to encircle the whole thigh, when the ends are again drawn firm and tied or otherwise secured above the anterior constrictor. 7. A long and a short oval cutaneous flap should invariably be made in all amputations at the hip-joint. 8. In preference a long anterior and a short posterior flap should be selected. 9. The transverse section through the muscles should be somewhat conical in shape, the apex of the cone corresponding to the tunnel made by enucleation of the upper portion of the shaft of the femur. 10. Resection of the end of the sciatic nerve and ligation of all vessels that can be found should be done before the removal of the constrictors. 11. The femoral arteries should be secured by a double catgut ligature spread half an inch apart, the one portion on the proximal side including also the accompanying vein. 12. The posterior constrictor should be removed first, and all hemorrhage arrested by ligation and compression before the anterior constrictor is removed. 13. The upper part of the wound corresponding to the acetabulum should be drained with an iodoform gauze tampon, and the remaining part of the wound by one or more tubular drains.

Calomel in Hypertrophic Cirrhosis of the Liver.—Dr. Sior advocates the calomel treatment in this disease. He relates the case of a man, aged thirty, who began to suffer nine months previously from jaundice, which steadily increased and was accompanied by much loss of strength. On presentation he was deeply jaundiced. The liver was much enlarged. Its surface was regular, somewhat hard, and not tender. The spleen was also enlarged. There was no ascites or œdema. The urine was deeply bile-stained, but the stools were not completely colorless. The temperature rose slightly in the evening. There was no history of alcohol. Various forms of treatment, including potassic iodide, were tried for a month, but without the slightest benefit. The patient was then given calomel, in doses of a little less than one grain, six times a day for three days, the drug being then omitted for the three following days. From this time the patient's condition commenced to improve. The jaundice soon began to diminish and the appetite was better. Eventually even the liver became less in size, as well as the spleen. After three months of such treatment, the jaundice had disappeared, there was no bile-pigment in the urine, and the stools were pale yellow in color. The liver only extended one finger's-breadth below the ribs in the nipple line, the upper limit of the dulness beginning at the sixth rib. The nutrition was excellent, and the strength good. —*Berliner klinische Wochenschrift.*

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE MEDICAL CHIEFS OF THE ARMY AND NAVY.

DURING the coming month the Surgeon-General of the Army and the Chief of the Medical Bureau of the Navy will retire, the former in consequence of the age limit, and the latter by reason of the completion of term of service. The influence of this proposed change is felt along the entire line of possible aspirants for each position. The established custom of promotion by rank is objected to by such as have not that qualification, on the score that the regular candidates are old and not sufficiently energetic to discharge the duties of their high and responsible offices with becoming progressiveness and zeal. While the latter may be true in a certain sense, it cannot justly offset the claims of men who have long borne the burden and heat of the day with the reasonable expectation of a reward at the end. In reality, if rank in the army means anything, its privileges can be estimated in but one way. In fact, every incentive for the faithful and patient performance of duty is with the implied understanding that the return must be in proportion to the amount of work performed and the extent of service rendered. There is no gainsaying this principle, however many exceptions to a general rule may be presented by such as believe themselves younger and fitter, and who cannot and will not wait for their legitimate opportunities.

As the rule is not absolute to appoint the senior officers, inasmuch as, in times gone by, other precedents have been established, it becomes a matter of grave responsibility on the part of the President and the Secretaries of the Army and Navy to do ample justice irrespective of partisan politics or political pressure. Doubtless, there will be much difficulty in deciding how the interests of the medical departments of the two services and those of the senior medical officers can be best reconciled, when account is taken of short services they may render and the necessarily frequent changes in connection with successive candidates. In the Army, for instance, the three senior medical colonels are Page, Smith, and Irwin. Page retires for age in December of the present year, Irwin in June, 1894, and Smith in April, 1895. By appointing these gentlemen in the order named the President would enable all of them to retire with the rank of Brigadier-General, and would have a fourth appointment to make within two years. This would certainly be the natural thing to do in strict justice to all, and would appear to be the most advisable unless some good reasons on account of evident unfitness should prevail.

While it is not desirable to make frequent changes, it is a question whether or not more harm might not accrue from an opposite course by destroying the prestige of rank and thereby discouraging those who have been and will be willing to work along and to patiently wait their legitimate turn. Allowing that the names are further taken in their regular order. Colonel and Surgeon Alexander would be the next candidate in 1895, retiring in May, 1897; Colonel Baily would then succeed him for one year, retiring in February, 1898, and then two years would be left for his successor Alden. Thus in seven years there would be six candidates disposed of, all of whom have served creditably in field and in hospital, and who deserve the promotion.

In comparison with those of the Army the medical officers of the Navy have other complications of promotion and terms of service. In the former corps the Surgeon-General fills his office until his retirement, which is at sixty-four years of age, two years later than his *confrère* of the Navy, while the latter retains the highest rank for four years only, and if he is not then at the age of retirement he is reduced to his former grade—a most unjust, unreasonable, and stupid measure. If there were any exceptions to be made in the regular order of appointments it would obtain with more force with the Navy than the Army, inasmuch as there might be some reason for arranging a rotation of office in reference to age and chances of being retired at or before the expiration of the chiefship.

From the present outlook, however, this would arrange itself reasonably well, for the available candidates for the position of Chief of the Medical Bureau of the Navy, Medical Director Albert H. Gihon is first on the list, with two years and a half to serve; Richard C. Dean, who follows, retires in two years, Albert C. Gorgas in three, Delavan Bloodgood in August of this year, David Kindleberger in three years, and C. J. Clerborne in seven years, during which latter period all of the foregoing would be retired.

Thus it will be seen by this review of the situation the proper selection of meritorious candidates might be very easily made on the one hand, or by making an exception to the rule might cause a great deal of difficulty on the other. We cannot, however, escape the conviction, after taking all the circumstances into account, that the larger majority of the medical officers of the Army and Navy would be better satisfied by the promotion by rank and seniority than by any other means. It remains to be proven if either service will seriously suffer thereby as each appointee will evidently do his best in his allotted time. But, above all, let us have no underhand work or political manœuvring, but the fairest possible play for such as deserve the distinctions. Politics never can make a good doctor in civil life, and no experiments on that line should be tolerated either in the Army or Navy.

SCAB-HEALING IN GENERAL SURGERY.

IN a recently published brochure, Mr. J. Delpratt Harris, of Exeter, calls attention to the advantages of dry dressings in the treatment of amputation wounds, compound fractures, and ulcers, and after operations of various kinds. Paget says that antiseptic surgery resembles scab-healing,

the dressings being analogous to the scab, only more scientific, and the author of this monograph claims that scab-healing practised in the manner he describes is truly antiseptic. He does not deny the usefulness of antiseptic dressings, but believes that his method may advantageously be substituted for it in many cases, especially in private practice in the country, where it is often impossible to follow out all the measures essential to strict antiseptic treatment. And unless antiseptic treatment be strictly carried out it works for evil rather than good, giving a sense of security where none exists. It is clear, he says, "that those surgeons who endeavor to carry out the dry dressing or scab-healing system, are following a strictly logical antiseptic treatment. In the one system the access and propagation of microbes is prevented by chemical means, in the other the fluid the microbes live in is conveyed away, and such microbes as exist in the wound are brought continuously in contact with the living tissues, and by them are speedily destroyed."

Dry dressings, in order to be really what the name implies, must be frequently changed, and it is a mistake to assume that the mere covering of a wound with dry lint or gangee dressing or absorbent wool is to treat the case with a dry dressing. The substance Mr. Harris prefers is sawdust from the yellow or red pine, cedar, or eucalyptus. To prepare it for use it should be first sifted in an ordinary coarse sieve. The portions remaining in the sieve are then ground in a coffee-grinder into dust. It is then of about the fineness of ordinary ground coffee, possesses a terebinthinous odor, and when taken in the warm hand, becomes sticky. It has the property of caking, and readily takes the form of the surface to which it is applied, and becoming warmed by the limb it retains the shape in which it has caked, and thus forms a splint affording very efficient support to the injured part. Bags of various sizes are made of two layers of ordinary absorbent gauze, and are about three-quarters filled with the prepared dust. The sawdust may consist of two parts pine and one of cedar, or, where gangrene is being treated, eucalyptus chips may be added, while in ordinary operative cases the pure pine-dust may be used.

In the case of amputation of a leg the operation is conducted in the usual manner, the limb having been previously washed with soap and water and sublimate solution. Particular pains must be taken to secure every bleeding point so that the wound may be as dry as possible. A horse-hair drain the thickness of a penholder is employed, and care is observed that the ends project at least one inch, but not much more than this, beyond the wound on each side.

"To insure the wound being dry and bloodless a flat sponge is introduced between the flaps and kept there until the last few stitches are being fastened. In making use of this form of dry dressing it is more than ever necessary to pay great attention to the mode of suturing. Each two portions of skin sutured must be approximated between the fingers, flat, and the suture carefully tightened until the two exact cut edges are brought together and no folding or inversion occurs. The stitches must be very close together and no protrusion between them must be allowed. Next a long-shaped sawdust pad is laid on the under surface of the limb and the end of the pad turned up over the superior surface of the limb. Two narrower side pads are next placed one on either side and thus close in the wound. A thin sheet of cotton-wool not hygroscopic is next placed over the pads, and the whole fastened securely with either a roller bandage or a three-cornered bandage. The object of the layer of cotton-wool having a certain amount of oil in it, is to prevent germs coming directly to the discharge which will be found in the sawdust pad. Waterproof of any kind cannot be used in dry dressings, if healing by scab is desired."

The second dressing may be necessary on the day following the operation or not until the third day, the indication being furnished by the appearance of the discharge coming through the pads. After removal of the cotton-wool and pads, the cut surface is seen to be marked by a fine line of dried gummy material. "The skin is not in the least red or inflamed, and the wound has in great measure the appearance of having healed. If it is decided to retain the horse-hair drain, it should be loosened, and with some warm water and a piece of cotton-wool as a sponge, be cleansed from the gummy crust. This enables the drain to act just as efficiently as before. The pads are reapplied in the same manner as before, and a longer interval may be allowed before dressing again." It is usually necessary to change the pad in the case of an ordinary amputation of the thigh, on the day following the operation, then on the third day following that, when the drain is removed, and then twice a week.

Under this method, Mr. Harris claims, the most perfect healing by scab is obtained, a very slight cicatrix is left and healing occurs in the shortest period possible and with the least possible pain.

The one absolutely essential point is that the scab be kept dry. Even ointments are injurious, as they soften the scab and render it valueless as a protection to the wound.

The author does not believe that this method will ever supersede the antiseptic in urban practice in those countries where antiseptic appliances are easily obtained and give such ideally perfect results, but he claims that it will be found most useful and satisfactory in its workings in rural practice in remote regions, on the battle-field, and at missionary stations in Asia and Africa where medical work is carried on, and where, owing to difficulty and expense of transportation, it is almost impossible to obtain a sufficient supply of chemical antiseptics and of material for elaborate antiseptic dressings.

THE ADVERTISING OF SPECIAL SKILL.

It was under the fostering care of the old Code and the American Medical Association that the practice of issuing cards announcing one's specialty was first introduced. It seemed a reasonable and harmless affair, though we at the time asserted that it was only an entering wedge for further special announcements. Now a St. Louis editor comes out with the statement that it was an unwise policy to debar physicians from "decently and delicately and properly advertising their calling to the public." He suggests an amendment to the Code as follows: "It shall not be considered unprofessional for a regular physician to publicly announce, in a modest way, his calling, the place of his graduation, his preceptor, his hospital experience, or his special line of practice, on his card or through the press; but it shall be deemed highly unpro-

fessional, as it is in the highest degree indelicate, to proclaim extraordinary skill through public handbills, private cards, or the public press, or to resort to the ordinary newspaper devices of quacks, such as advice free, no cure no pay," etc.

The trouble here lies with the very varying estimate which will be put upon what is "decent, delicate, and proper." One man might announce his qualifications with perfect truthfulness and no exaggeration. But his neighbor, who had not had quite the same advantages, would nevertheless find it necessary to issue a placard equally attractive. Very soon a competition in announcements would follow, and the regular profession would soon be in much the same position as competing tradesmen. Who could deny the possibility, for example, of such an announcement as that which the *Cincinnati Lancet and Clinic* suggests: "Dr. Clapp, a regular physician, graduate of several schools, as diplomas in office will show. The Doctor studied with Dr. Jacques, the noted authority upon venereal diseases, but not being content with the information there afforded, Dr. Clapp spent several years in Europe. Having thus obtained all possible knowledge of venereal diseases, he now offers his services to those who have offered sacrifice upon the altar of Venus. Gonorrhœa, syphilis, and soft chancres a specialty."

If doctors begin to advertise, their living expenses will be greatly increased, their honesty called in question, and they will soon be reduced to the level of competing tradesmen. Furthermore, the public will not be able to judge between the decent announcements of the honest man and the sensational advertisement of the quack.

THE DOCTOR A GENTLEMAN.

Dr. T. B. Greenley, in the *American Practitioner and News*, has written a little essay on "Why and How the Doctor Should Be a Gentleman." And by a gentleman he does not mean that special class technically so called in monarchical countries; but a gentleman in the American sense, as Emerson has defined it. He means a person who is always considerate of others, who is courteous, kindly, and sincere. Dr. Greenley rightly says that there is much unnecessary hard feeling, ungenerous criticism, petty quarrelling, and that there are many childish enmities and jealousies among medical men. Their work is made the harder thereby, their life less pleasant, their opportunities for mutual help restricted. In a town with a dozen physicians, note the number who speak cordially to each other or of each other. They are as rare as righteous men in Sodom. Strange to say, each one has an excellent reason for his dislikes. Dr. A—— is inclined to advertise, Dr. B—— took a case away from him, Dr. C—— uttered some slanderous remarks about his way of treating a certain case of diphtheria, Dr. D—— is ignorant and plainly incompetent; and Dr. E—— is young and thinks he knows more than the rest already. So the comments run, and with each word another character dies.

But the true gentleman remembers that he himself, as well as all his brother-men, are imperfect beings. There may be an excuse for the ill-natured remark or the ungenerous conduct. Perhaps the story was false. At any rate, a generous and kindly attitude toward the brother would be better in the end, for it would make him ashamed of himself.

If physicians only knew how much more they could gain by being tolerant rather than critical, courteous and friendly rather than distrustful, they would make some mighty efforts toward becoming always and everywhere gentlemen.

AMERICA AND MEDICAL LITERATURE.

The *Medical Press* of London says: "In a recent address given before the New York Medical Association, it is stated that 'at the beginning of the Revolutionary War there was only one Public Medical Library. It belonged to the Pennsylvania Hospital, and it contained about two hundred and fifty volumes. In the present day there are over one hundred thousand medical works in medical libraries in the United States.' This certainly does not seem a matter about which to feel so very proud. America is an enormous continent, and everything is large there—both men and things, in imagination and otherwise—for a hundred thousand volumes, therefore, to represent the aggregated collection of medical works in all the public medical libraries scarcely comes up to the standard of 'largeness' which everywhere prevails in the States. In comparison with this small kingdom, one library alone, in London, that of the Royal College of Surgeons, contains 47,000 books, with completed space for 26,000 more, and if we add to these the libraries of the other medical institutions and associations, London alone would show a much larger collection than the combined medical libraries in the United States, irrespective of the extensive accumulations in Dublin, Edinburgh, Glasgow, and the Provinces."

The *Press* reasons justly enough, but it has either misquoted or the author of the address made a mistake. There are over 150,000 books in the Army Medical Museum Library at Washington. The two large medical libraries of this city contain over 100,000 volumes. Philadelphia has libraries amounting to nearly 100,000; so that our esteemed contemporary would have come nearer if it had put the collections of medical books at half a million.

Anæmia.—Dr. Wilcox, following the classification of Oppenheimer and Gräber, divides the subject into: 1. Simple anæmia: where both the corpuscles and hæmoglobin are diminished. 2. Chlorosis: where the corpuscles are normal and hæmoglobin diminished (females). 3. Primary chlorosis or pernicious anæmia: where the corpuscles are diminished and the hæmoglobin relatively increased. Perhaps this might be better stated by saying that the percentage of decrease of corpuscles is greater than that of hæmoglobin.

The author's conclusions are: 1. In anæmia, iron is by far the best remedy. 2. Of all preparations, the tincture of the chloride is the most valuable. 3. This preparation is objectionable in that it excites nausea, disgust, and vomiting, stains and destroys the teeth. 4. These disadvantages are obviated in syrup of the chloride of iron containing twenty-four minims of the official tincture of the chloride with the excess of acid neutralized and syrup of gaultheria added to improve the taste. 5. In removing these disadvantages, its therapeutic efficacy is not in any way impaired.

News of the Week.

Examinations for Admission to the Marine Hospital Service.—A Board of Officers will be convened at Washington, D. C., June 26, 1893, for the purpose of examining applicants for admission to the grade of Assistant Surgeon in the U. S. Marine Hospital Service. Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from at least two responsible persons, as to character. For further information, or for invitation to appear for examination, address the Supervising Surgeon-General, U. S. Marine Hospital Service, Washington, D. C.

Texas State Medical Association.—The twenty-fifth annual session of this Association will be held in Galveston, May 2, 3, 4, and 5, 1893. The preliminary programme gives promise that the meeting will be of great interest. The President of the Association is Dr. J. D. Osborn, of Cleburne, and the Secretary, Dr. H. A. West, of Galveston.

Annual Meeting of the Missouri State Medical Association will be held at Sedalia, Mo., May 16, 17, and 18, 1893.

Dr. Charles H. May has been appointed Adjunct Visiting Ophthalmic Surgeon to the Mt. Sinai Hospital.

Typhus Fever is reported to be epidemic in the penal institutions of Paris.

Influenza is epidemic in Paris, and the mortality of the city has risen to an unusual figure in consequence.

Cholera still prevails in Lorient, France, some 400 cases and 150 deaths having occurred there in the past five weeks.

Congress of American Physicians and Surgeons.—At a recent meeting of the Executive Committee of the Third Congress of American Physicians and Surgeons it was decided that three afternoons and one evening of the Congress be assigned, in sessions of one and a half hour each, to seven of the fourteen participating organizations: and that each society selected shall be requested to prepare its own programme and select its own speakers. The selection of the societies under this resolution, to prepare programmes for the Third Congress, was made alphabetically as follows: 1, Anatomists; 2, Climatologists; 3, Dermatologists; 4, Genito-Urinary; 5, Gynecologists; 6, Laryngologists; 7, Neurologists. The Ophthalmologists, Orthopedists, Otologists, Pedriatics, Physicians, Physiologists, and Surgeons under this resolution will in like manner prepare programmes for the Fourth Congress. The President and Secretary of the Congress and the Chairman and the Secretary of the Executive Committee were made a Standing Committee to arrange the details of the Congress. Dr. L. C. Gray was elected Chairman of the Executive Committee, *vice* Dr. William Pepper, resigned. It was further decided to hold the Congress in Washington, D. C., on the last Tuesday in May, 1894, and the three succeeding days.

The National Academy of Sciences met in Washington last week. Among other communications, Prof. Alexander Graham Bell gave an interesting biography and description of Helen Kellar, the Alabama marvel. This wonderful girl was, by an unfortunate illness in childhood, rendered deaf, dumb, and blind. Nevertheless, although now only thirteen years of age, she has accomplished wonders in the way of overcoming her difficulties. Specimens of her handwriting and original stories and poems were presented by Mr. Bell, who said that the girl was recovering her power of speech, and was, indeed, a prodigy.

Death of Dr. Edwin T. Doubleday.—Dr. Edwin T. Doubleday, of this city, died suddenly at his home on April 23d, of heart disease, after an illness of a few hours. Dr. Doubleday was thirty-three years old, and was graduated from Bellevue Medical College in 1882. He was the founder of the Hospital Graduates' Club. From November, 1883, to June, 1884, he was house doctor at the New York Hospital, and at the time of his death was the partner of Dr. Percy R. Bolton.

The Medical Society of the County of New York met on April 25th, and passed a resolution which, after condemning the quarantine regulations adopted by the city authorities last year, and their methods of purifying the water-supply, provided for the appointment of a committee of five to confer with the Quarantine and Water shed committees of the New York Academy of Medicine. The following were appointed to act on this committee: Drs. Daniel Lewis, J. West Roosevelt, Henry D. Chapin, William A. Ewing, and Frederick R. Sturgis.

Alumnol, not Alum Oil.—The substance alumnol was referred to on page 416, and not alum oil as erroneously printed.

Oxford University has decided to confer degrees in Public Health.

The French Surgical Congress met in Paris on April 3d, under the presidency of Professor Lannelongue. In his opening address Lannelongue quoted the words of Boyer in the preface to his "Treatise on Surgery," published in 1822. "Surgery," said Boyer, "has to day made the greatest progress, and seems to have attained perhaps the highest degree of perfection of which it is possible!" The following are among the papers read: Dr. Boiffin, of Naples, "Contusion of the Abdomen from a Kick of a Horse:" Dr. Pannè, of Nevers, "A Series of Seven Tarsectomies for Equino varus;" Dr. Reynier, of Paris, "Suppurating Hydatid Cyst with Concomitant Peritonitis; Laparatomy; Recovery." Dr. Martel, of St. Malo, "Stalk and Ear of Corn in the Male Bladder: Successful Supra-pubic Lithotomy; Presentation of the Extracted Foreign Body;" Dr. Février, of Nancy, "Resection of the Superior Maxillary Nerve and Meckel's Ganglion by a Temporal Incision for Obstinate Neuralgia of Twenty-one Years' Standing, and Localized to the Second Division of the Fifth Pair."

Dr. Villar, of Bordeaux, read a paper on spinal laminectomy. He had recently operated on a man on the fourth day after his injury. The result was very satisfactory. A man received on his back a shock from a weight of two hundred pounds which fell on him. Immediately he felt great pain in the lumbar region, and when examined, soon after the accident, a depression corresponding to the twelfth dorsal vertebra was found, giving rise to a complete paralysis of both extremities and a suppression

of sensation in both members up to the knee. On the fourth day, Dr. Villar trephined and found the cord pressed between two plates of bone; having removed these the wound was closed. Three weeks subsequently motion reappeared in the right leg, but sensation had not returned; the man's condition has continued to improve, but the left side is still paralyzed.

Dr. Tuffer, of Paris, gave a *résumé* of his experience in renal surgery. In the case of nephrorraphy the results were perfect in every case where the operation was well indicated, that is to say, where the luxation of the organ was without complication. Nephrotomy, of which Dr. Tuffer had collected seventeen cases, gave good results each time that it was performed early, otherwise a fistula occurred extending to the perineal cavity. As to nephrectomy, in a general point of view it had been well proved that a man could live physiologically with one kidney in normal condition. In a local point of view nephrectomy is followed by fistulæ; why, he cannot say. He had removed the kidney twelve times, but he never had a fistula. It would seem that the cause arose from the fact that the renal bed where suppuration existed did not properly contract. The ureter when inflamed and dilated would also give rise to fistula.

Dr. Delorme, of Paris, read a paper on "The Surgery of the Chest." He had been brought to employ a new mode of operation destined to replace, in certain cases, Estlander's operation, and to permit other intra-thoracic interventions. The operation which he proposed consists in the formation of a large thoracic shutter, so to speak, comprising the soft parts and the ribs. This shutter held wide open gave free access into the cavity, and when the operation was terminated it could be closed down and sutured to the fixed walls. From the third to the sixth rib he traced the piece to be cut by an incision representing the three sides of a rectangle, the flap having a direction downward and forward like the ribs; the base of the rectangle is left intact by the scalpel. After the soft parts have been dissected off the ribs as far as this base, the ribs are cut through as well as the intercostal spaces in front, while behind they are gently cut, but the spaces are respected. The shutter is then opened with ease, and the pleural cavity examined in all directions.

Dr. Thiria, of Brussels, read a paper on a new method rendering the results of operations for the radical cure of hernia more durable. Owing to the yielding of the parietes at the seat of incision relapses are unfortunately not uncommon after this operation. To remedy this inconvenience Dr. Thiriar proceeds as follows: The sac being opened and the stump reduced, he fixes with catgut sutures a plate of decalcified bone between the stump and the abdominal wall, the dimensions of the plate being proportional to that of the orifice to be obturated. In twenty-one cases operated on a firm cicatrix has been obtained and no relapse of the hernial condition has been noted. Post-mortem examination in one instance showed that the plate becomes absorbed and is replaced by a resisting and hard cicatricial tissue.

The Other Point of View.—New York City during the month of March had a death-rate of nearly 30 per 1,000, computed annually, while that of Chicago was a trifle over 16. No doubt the returns of our Health Office will be declared false by the typhus and small-pox infected Knickerbockers by the sea who drink the cesspool drainage of the Croton watershed with all its animated creation, and find fault with the outside world except when some local public enterprise drives them as usual to take up a collection among people more fortunately situated.—*Chicago Medical Recorder.*

The Physician in Politics.—The Practitioners' Club of Chicago held its fifteenth banquet at the Leland Hotel, March 27th, with Dr. E. J. Doering in the chair. The subject discussed was the profession in politics, introduced by Dr. John B. Hamilton and Dr. A. R. Reynolds. The opinion was generally expressed that it was the duty of the physician to interest himself in local politics and in politics in the best sense of the word; that there are many questions of public interest which only physicians can properly pass upon, and that unless the physician does so interest himself he has no right to complain of unwise legislation and bad municipal measures involving his own privileges, or the public health.

Places for Populist Doctors.—The following comes from Topeka, Kans:

"A New Health Board. *Governor Lewelling Will Make a Place for Six Populist Doctors.*—The State Board of Health is soon to be reorganized by Governor Lewelling. Dr. R. C. Musgrave, of Grenola, Dr. R. A. Williams, of Olathe, and Dr. Andrew Sabine, of Garden City, who were appointed a year ago by Governor Humphrey for a term of three years, were not confirmed by the Senate, and will be removed to give place to Populists. The terms of J. Milton Welch, of LaCygne, Dr. G. H. T. Johnson, of Atchison, and Dr. D. C. Jones of Topeka, expire this month, making six places on the board to be filled by Governor Lewelling, while three Republicans hold over. As soon as the new members are appointed, a new secretary will be elected to succeed Dr. O'Brien. Governor Lewelling has given it out that he will dictate the appointment of secretary, though he is elected by the board, and there are a number of candidates for Lewelling's indorsement. Dr. J. W. Donaldson is recommended for the position by almost every physician in Topeka, and Dr. Patee, Dr. Warner, and Dr. Furber are also candidates. The secretaryship draws $2,500 a year, and is the only salaried position connected with the office."

The Associated Physicians and Surgeons.—This is the title of a corporation that has been organized in New York, with Dr. Daniel Lewis, as President, "for the purpose of performing the clerical, financial, and legal work necessary to the proper conduct and protection of the business affairs of medical men."

A Congress of Medical Climatology will convene in the Art Building in Chicago on May 29th, and continue in session for a week. On June 1st there will be a discussion on the causative and curative relations of climate to consumption.

The University of Dorpat has been abolished. It was founded in 1622 by Gustavus Adolphus.

He Has Not Found It.—The report that Dr. Koch's recent experiments with a "new antituberculosis liquid," not administered by injection like lymph, but by inhalation, have shown marvellous efficacy, is pronounced untrue.

Society Reports.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 8, 1893.

R. H. Savre, M.D., Vice-President in the Chair.

Purulent Meningitis.—Dr. Warren Coleman presented specimens from a case of purulent meningitis which was of special interest on account of the peculiar distribution of the pus and the absence of any satisfactory explanation of its origin. No proper history was obtainable, but it was learned that the patient, who was thirty-five years of age, had been suffering from malaise, and had had a temperature of 102.5° F. for a short time previous to his admission to the hospital. Shortly after admission he became comatose, and remained in this condition until his death, twenty-one hours later. At the autopsy the pus was found under the pia all over the convexity, and somewhat over the vermiform process, but the base was remarkably free from it. There was a purulent liquid in the spinal canal. At first it was thought that the condition was of tubercular origin, but no bacilli were found in the pus. The heart from the same patient was found hypertrophied, its vessels injected, the wall thickened, and the cavity dilated. One chorda tendinea was situated across the ventricle near the apex, and another near the base, the latter being in such a position that it must have given rise to a murmur during life. Both cavities were filled with clots which had formed some hours before death. The left cusp of the aortic valve was the seat of a recent vegetation; the other two were thickened in places. The mitral valve was retracted and slightly thickened along its free border. The lungs did not collapse on opening the thoracic cavity. There were a few slight adhesions at the left apex, and the upper lobe of this lung was contracted from pleurisy. On section this lobe was found studded with miliary tubercles, and there was one small cheesy mass at the apex. The lower lobe showed only congestion and œdema. The right lung was in about the same condition. The intestines looked normal, and were not opened. The spleen and pancreas were normal. The liver showed cirrhosis, congestion, and some fatty change. The kidneys were the seat of chronic diffuse nephritis.

Dr. E. D. Fisher said that he did not remember to have seen such an extensive purulent meningitis without more involvement of the base, and the symptoms were not at all sufficient to account for the compression which must have been produced. Although considerable time must have elapsed between the commencement of the inflammation and death, the condition could hardly have been diagnosticated during life.

Dr. Coleman said that the house physician had been led to infer from the symptoms that there had been an injury to the skull, but being unable to localize it an autopsy was requested.

The Results of Instrumental Abortion.—Dr. A. T. Weston exhibited the uterus and appendages from a woman who died twenty-eight days after an instrumental abortion. There was a sloughy area in the uterus, undoubtedly indicating the use of instruments. The left Fallopian tube was enlarged and filled with pus, and between it and the pelvic wall, posteriorly, was an abscess cavity containing about two ounces of fluid pus. The only history obtainable was that an abortion had been produced, and that the patient had had an attack of peritonitis from which she seemed to have almost recovered, when there was a sudden relapse and a fatal termination. At the autopsy the peritoneum was found to be normal, with the exception of a few small points of recent adhesion, which were found in connection with the condition just described. Death was undoubtedly due to exhaustion incident to the pelvic abscess.

The speaker also read notes of five other recent cases of this kind. The marks of instruments were plainly seen in one, they were not visible in two: in two there was considerable doubt as to whether certain small ulcerated areas were due to instruments. In three of the cases death occurred about ten days after the abortion, and was due to septic peritonitis, and in two death occurred twenty days or more afterward, and was due to septicæmia.

Perforation of the Lung.—Dr. E. Hodenpyl presented two specimens of perforation of the lung in which death almost immediately followed the perforation. The first patient was thirty-five years of age, and his last illness began three months before his admission to the hospital on January 21, 1893. Previous to admission there were cough, muco-purulent expectoration, dyspnœa, and progressive loss of flesh and strength. Four weeks before coming to the hospital, after exposure to cold, the patient became hoarse. At the time of admission there was marked prostration; pulse 112, respiration 28, temperature 103.6° F. Over the left chest in front the breathing was much diminished, and in the first space it was amphoric. Over the left side, posteriorly, there was dulness to a point midway between the spine and angle of the scapula; breathing and whisper were amphoric. Over the right chest, in front, there was dulness in the first and second spaces, with greatly diminished breathing, and below this the resonance was tympanitic, the breathing was harsh, and there were numerous friction sounds. Posteriorly, there was dulness to a little above the angle of the scapula. Near the spine there was an area of cavernous breathing. From February 16th to 26th there was moderate diarrhœa. On the morning of February 27th the patient suddenly died. At the autopsy on opening the right side of the chest gas escaped. The pleural cavity contained a sacculated accumulation of greenish fluid with considerable fibrin. About the middle of the upper lobe was a circular perforation of the pulmonary pleura about one eighth of an inch in diameter. The upper lobe was consolidated and fibrous, and contained a large, irregular cavity, and many miliary tubercles. The lower lobe contained a few tubercles. The entire left lung was consolidated, and studded with tubercular nodules, and there were cavities in the upper lobe. The appendix vermiformis was the seat of tubercular ulceration, and both the large and small intestine were studded with tubercular ulcers of various sizes, some of which involved the serous coat of the intestine. The larynx and trachea were extensively involved in the tubercular process. With the exception of some fatty degeneration of the heart and liver, the other organs were normal.

In this case there were practically no throat symptoms, notwithstanding that the epiglottis was entirely ulcerated away. The diarrhœa was also very moderate considering the very extensive involvement of the bowel.

The second patient was said to have been ill for about one year, and to have been confined to bed for the greater part of the last two months of her life, yet just before the perforation occurred she was busy sweeping. While thus engaged, she was very suddenly seized with an agonizing pain in the chest, and, although quickly removed to the hospital, she died within a few minutes after admission.

Dr. J. W. Brannan cited a case of pneumothorax which had not been diagnosticated, but in which there was every reason to believe the patient lived five or six days after its occurrence. The case was one which had been in the hospital for three or four weeks with symptoms which had led to the diagnosis of typhoid fever, and when he first saw the patient it was supposed to be in the fourth or fifth week. Four or five days before death he was found one morning quite cyanotic, and this condition continued up to the time of his death. The autopsy showed the left pleural cavity filled with air, and the lung retracted and compressed in its upper portion. The lung contained two rather large cavities, both of which communicated freely with the pleural cavity. There were tubercles and cheesy degeneration in the right lung,

but no cavities. There was absolutely no involvement of Peyer's patches, so that the diagnosis should have been acute tuberculosis instead of typhoid fever. In this connection it was interesting to note that the house physician had remarked that this was the first case of typhoid fever which he had known to protest vigorously against the use of the cold bath, or in whom reaction had not been readily established after the bath.

Regarding the effect of the perforation of the lung on the system, Fagge says that if the pneumothorax occur into the relatively sound lung, its occurrence is apt to be marked by severe symptoms, and death speedily follow; but that if the pneumothorax occur on the side which is the more extensively diseased, that is to say, in the lung which is not much used, the symptoms may not be urgent, and death does not occur for some time afterward, or the patient may even recover. In the case which he had just reported, the pneumothorax occurred on the side of the chest which was the more diseased.

Dr. George P. Biggs thought that in many cases pneumothorax did not cause sudden death. He could recall a case of pyo-pneumothorax with abundant purulent effusion, in which the lungs were not very extensively involved, where after drawing off the pus, the patient was discharged from the hospital in good condition.

Dr. J. H. Huddleston said he had seen two cases of pyo-pneumothorax in hospital, both of which recovered, and were known to have been alive for a long time afterward.

Dr. W. P. Northrup referred to a case in his service at the Presbyterian Hospital, in which the history showed that the pyo-pneumothorax in all probability dated back two months. The case had been seen in consultation with Dr. Janeway, who thought that if aspiration were performed there was a fair prospect of recovery.

Dr. W. G. Le Boutillier said that in Dr. Hodenpyl's cases death was probably due to shock, whereas in many other instances in which the fatal termination is not so sudden, death apparently results from compression and obstruction of the circulation.

Aneurisms of the Mitral Valve; Cerebral Embolism.—Dr. W. G. Le Boutillier presented specimens, removed from an inmate of the Workhouse, a laborer, fifty-four years of age, who was given in door work because he seemed a little stupid. He worked as usual on March 2, 1893, up to dinner-time, but a few moments after dinner, while sitting on his cot, he was seen to fall over to the left. When seen by the house physician, about ten minutes later, he was lying on his left side, moving the left leg and arm as if in an attempt to raise himself. The right arm and leg were motionless and rigid. Respiration was stertorous, the face dry and congested, temporal arteries full. He did not appear to understand questions, and did not speak. Later in the afternoon he was still unconscious; respirations labored and rapid; face flushed and moist; eyes turned to the left with vertical and horizontal oscillations; pupils equal and fairly responsive to light; pulse 104, hard and full. The urine was voided in bed, although the bladder had shortly before been emptied by catheter; the urine also contained albumin. The reflexes could not be determined, and the noisy respiration precluded a satisfactory physical examination of the chest. The following afternoon the pulse was 60 to 80 and irregular, temperature 104° F., respirations of the Cheyne-Stokes variety; eyes no longer turned to the left; pupils were immobile and unequal, the left seeming to be normal, and the right contracted. He had not moved the right side since the beginning of the attack, and there were still fibrillary twitchings of the muscles on that side. The left side was quiet but not paralyzed; patellar reflex was exaggerated on the right side, and normal on the left. He remained comatose, and in about the same condition, except that the temperature rose to 107° F. in the rectum, and there was perspiration over the entire body, until his death, at 5.30 A.M. on March 4th, forty two hours after the commencement of the attack.

The autopsy was made nine hours later. With the exception of an infarction at the right apex, and a moderate amount of emphysema, the lungs were normal. The heart was large, weighing 19½ ounces; the left ventricle was hypertrophied so that its wall measured 23 mm. in thickness. On the auricular surface of the anterior segment of the mitral valve were two small projections which were at first supposed to be vegetations, but which closer examination showed were aneurisms about 3 mm. in diameter, opening on the ventricular surface by very small orifices containing no clots, and free from any evidence of ulceration. There were one or two small areas of thickening on other portions of the valve. The other valves of the heart were normal. The coronary arteries were atheromatous and in places calcified. The kidneys were small, capsules not adherent, surface smooth, cortex thin, and markings indistinct. Over the convexity of the brain the vessels, especially on the left side, were much injected, and the whole left hemisphere was quite soft. On the inferior surface of the inner portion of the frontal lobe was an area 4 ctm. long and 3 ctm. wide, which was the seat of numerous punctate hemorrhages. In the floor of the left lateral ventricle, in the corpus striatum, was another group of punctate hemorrhages. With the exception of the extreme front and inner portion of the frontal lobe, and the posterior and inner portion of the occipital lobe, the whole of the left hemisphere was so soft as to almost liquefy under manipulation. The cerebral vessels were atheromatous, and the left middle and anterior cerebral arteries contained clots adherent to the intima, and apparently due to embolism.

Strictures of the Vermiform Appendix.—Dr. George P. Biggs presented two specimens of stricture of the vermiform appendix. The first one was removed from a patient dying of chronic alcoholism, and without any history, so far as known, of symptoms referable to the condition of the appendix. The appendix lay entirely behind the cæcum, and was 9 ctm. long and 2 ctm. in diameter. It had a distinct mesentery except at its tip. About one-half ctm. from its origin its lumen was occluded by firm fibrous bands, which had evidently formed at some previous time in the course of a reparative process following a localized sloughing. The contents of the appendix measured two drachms, was of a slightly pinkish color, and consisted of fat globules, granular matter, and cholesterine crystals.

In the second case, the vermiform appendix lay between two folds of peritoneum, forming the mesentery of the lower portion of the ileum, instead of having a free mesentery of its own. In this case the tube was about 8 ctm. in length and ¾ ctm. in diameter. There were two distinct points of obstruction near the tip, which were apparently not the result of disease, but due to the bending produced by the peritoneum. The patient died of advanced Bright's disease.

Dr. Hodenpyl said that this interesting condition was a comparatively common one—he had observed it no less than three times within the past week—and it explained the origin of many cases of appendicitis. A few years ago, Dr. McBurney stated that if the appendix were diseased, firm pressure just over the appendix would always elicit pain; but Dr. Weir subsequently found that he was able to elicit pain by making pressure at this point in a number of supposedly healthy persons. Possibly these two statements might be reconciled by the existence of some such lesion as that exhibited in these specimens.

Dr. George P. Biggs said that he had made a number of experiments for Dr. Bryant relative to the location of the appendix, and its base was frequently found a considerable distance above or below "McBurney's point," so that tenderness at this point was, after all, a very disappointing sign. In making these experiments long needles were passed down through the abdominal walls before opening the abdomen.

Dr. S. T. Armstrong said that recently he saw a patient who was chilly and feverish, and decidedly tender at this point. It was thought at first that an operation

would be required, but by the next day all these symptoms had disappeared, and the case proved to be simple malarial fever.

Dr. Huddleston had seen twenty-two bodies examined in a dissecting-room with reference to the relation of the vermiform appendix to this point, and in only one of these did the needle pass through the abdominal wall within one inch of the base of the appendix.

Dr. T. H. Manley thought one of the specimens presented looked as if the occlusion were of congenital origin. In a recent post-mortem examination he had found the appendix lying behind the cæcum.

A Malignant Tumor of the Tonsil.—Dr. Robert C. Myles exhibited a portion of a tonsil which he had removed from a woman seventy years of age. There was an enormous malignant growth, probably a sarcoma, in the throat, connected with it, and the patient was unable to swallow. In removing such large growths the great danger is from hemorrhage, but in this case the removal was rapidly and successfully effected by using a No. 18 platinum wire with a powerful galvano-cautery battery. It is necessary for this particular work that there should be an abundance of current at the disposal of the operator.

Dr. T. H. Manley exhibited three specimens of omental hernia which he had removed by operation, and also one of hernia of the ovary, occurring in a little girl about two months of age.

Very Extensive Dysenteric Ulceration Associated with Mild Symptoms.—Dr. Huddleston presented specimens taken from a woman, fifty-one years of age, who had suffered first from diarrhœa, and then from an intractable form of dysentery. She had ten or twelve bloody stools a day, but no pain; the abdomen was somewhat shrunken but not specially sensitive, and the physical examination was practically negative. Opiates, astringents, and irrigations had no effect on the disease. She gradually wasted away, and died of exhaustion. The post-mortem examination showed the lesions to be chiefly confined to the colon, which was the seat of such very extensive ulceration, that the slight movement of turning back the mesentery was sufficient to tear the colon from one end to the other. Throughout the entire colon there were only small areas which had escaped the ulcerative process, and in several places the ulceration had extended through the muscular layer down to the peritoneum. The kidneys showed some slight cirrhotic changes, and situated upon the left kidney, though not entering into its structure, was a cyst about six inches in diameter, which was filled with clear yellow fluid. The cyst-wall showed numerous areas of calcification.

Dr. Northrup said that he had seen an exactly similar case of ulceration occurring in a student who gave a previous history of chronic constipation. He suffered from a low type of fever, and the clinical symptoms gave no indication whatever of the nature and extent of the lesions.

The Society then adjourned.

Ophthalmia Neonatorum. Veasey says, may be prevented by cleanliness of nails and fingers in making vaginal examination, assisting eyes to pass rapidly over perineum, cleansing them immediately after birth, not using same water for face and body, preventing soap from entering eyes, burning whatever touches ophthalmic discharge, instructing laity, and using Credé or other method of cleansing eyes after birth.

Milk as a Dressing for Burns.—A French physician has obtained good results in dressing burns with milk. Compresses are soaked with milk and laid on the burn, to be renewed night and morning. An extensive burn on the leg was healed in this manner. Two days reduced it in size from fourteen to seven centimetres; at the end of three days it measured but two centimetres and a half in diameter. Another burn, which had been treated for eight days with olive oil and oxide of zinc, healed rapidly under a simple milk dressing.—*Bulletin médical.*

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, April 17, 1893.

Samuel B. W. McLeod, M.D., President, in the Chair.

Small-pox and the Value of Vaccination as a Preventive.—Dr. Pedro J. Salicrup read the paper, which was based on his experience with small-pox in Porto Rico, one of the West India Islands. Since he had been in New York he had seen only three cases of small-pox, and the comparative rarity of the disease here, due to compulsory vaccination, had detracted considerably from the interest of the subject. Now and then, however, a case occurred, especially in tenement-houses, but usually of mild type. He had held office as a public vaccinator in Porto Rico for a number of years, and could testify to the efficiency of this method of shortening epidemics and rendering the disease, when it did occur, less severe. This had been especially true since an institute had been established for the production of pure vaccine. The prevalence of the disease in Porto Rico would be manifest when he stated that about forty per cent. of the people showed the characteristic pitting. To this number was to be added that of the fatal cases, which was great. The negroes seemed to be especially susceptible, and their dirty habits and unsanitary surroundings greatly facilitated the spread of the virus among them. Dr. Salicrup briefly reviewed the history of small-pox and of vaccination, and his division of the disease into types and stages did not vary essentially from that found in most text-books. The disease for which it was most likely to be mistaken in the West Indies was yellow fever. The latter was more likely to prove fatal to whites, small-pox to negroes. It had not been unusual for persons who had been suffering from some constitutional ailment, such for instance as so-called scrofula, to be free of such trouble after an attack of small-pox. The treatment which he had resorted to had been as follows: If he saw the case at the onset he prescribed a dose of calomel, followed four or five hours afterward by a saline or castor-oil purge. After the effects of the purge had passed, he sought to relieve the congestive symptoms. The body was anointed with two per cent. carbolic acid the moment the eruption appeared. Carbonate of ammonia and chlorate of potash were administered internally. When the skin caused itching he smeared it with glycerine containing oil of peppermint, two or three drops to the ounce. When the pustules were fully ripe he had them cut open and their contents pressed out, washed with a weak solution of carbolic acid and hypophosphite of soda, and smeared with glycerine and peppermint mixture. Proper feeding and hygienic measures were looked to. The room was kept as well ventilated as possible, rather dark, disturbing influences being excluded. Some of the symptoms, such as pain in the head and loins, might require special treatment, warm baths and diaphoretics might be useful. In the later stage stimulants might be called for.

The efficiency of vaccination had been shown by the almost complete disappearance of small-pox in countries where it was generally practised. The author had not seen a case in which another disease had been conveyed or injurious consequence result from vaccination, provided the vaccine virus were pure, that is, consisted only of lymph unmixed with blood or other extraneous substance. In practising vaccination he believed that the more nearly the operation was made bloodless the better.

Fifteen Years without a Case of Small-pox.—Dr. J. Lewis Smith said he had not seen a case of small-pox in fifteen years, whereas before that date he had seen a number of cases annually in New York. The change was due to the establishing of a health board which had carried out isolation and vaccination. He had used certain remedies in other infectious diseases attended by headache, fever, perhaps convulsions, and certain general symptoms seen in small-pox, and their success had been

so marked that he believed that they would relieve suffering and lead to a favorable termination of small-pox, although he had not had opportunity to treat a case of this disease since the remedies referred to had come into use. The first, for the relief of headache, etc., consisted of a powder made up of a mixture of oil of cinnamon, ten drops; phenacetine, four scruples: bromide of sodium, three drachms; caffeine alkaloid, twenty grains; sugar of milk, one drachm; divided into ten powders, one to be taken every four to six hours by an adult. For the relief of itching he would recommend carbolic acid, four drachms; Listerine and tincture of camphor, each four ounces, perhaps add ten grains of cocaine: mix, shake, and add of this five teaspoonfuls to a quart of water and apply to the itching and inflamed surface. This had been very successful, at least in the itching of erysipelas.

Dr. Smith thought small-pox would disappear altogether from New York if it were not for the constant influx of foreigners. The stage of incubation was often so long that those coming from Europe might not show any evidence of the disease which was in their systems until after they landed. In the country he might wait two years before vaccinating an infant, but in New York it was not safe to wait longer than the fourth month of age. He had no doubt but what in olden times, when human virus was used, syphilis and scrofulous diseases had sometimes been inoculated during vaccination. This did not occur when the virus from the cow was employed. The latter, however, caused a larger sore and more intense inflammation, which sometimes ran a course of four weeks and caused the child much restlessness. The carbolic-acid mixture just referred to was useful in relieving the local itching in these cases. It had been stated that the more numerous the scars from vaccination the milder the attack of varioloid, should this occur, and therefore it had been considered better to inoculate in several places.

Small-pox in South Africa.—Dr. J. A. Campbell sent a brief communication, reciting some observations during an epidemic or small-pox in South Africa. It had started in Cape Town, and from there extended. Vaccination had proven a preventive, for only few of the Dutch population had the disease, and among them the mortality was much less than among the negroes. Among the latter the mortality had been seventy-five per cent. Yet vaccination when practised among the native negroes was just as effectual, or even more effectual in preventing small-pox, than among the whites. It was an interesting fact that in a village in which diphtheria became epidemic every white child which contracted the disease died, while none of the children of natives took the disease at all.

Experience as Public Vaccinator.—Dr. Antranig Ayvazian had seen several hundred cases of small-pox during the last five or six years. There was no doubt but what successful vaccination went far to prevent this disease, yet a number of the cases of small-pox occurring in the city the past few years had at some time been vaccinated. Some cases that had been exposed to small-pox were immediately vaccinated and successfully, yet small-pox developed, though in mild degree. The Board of Health of the city now made no distinction between varioloid and variola, they being the same disease but of different severity. It had not been his experience that those who had had several marks had small-pox, when this occurred, in milder form than those with but one vaccine mark. This statement was based on careful observation of one hundred and twenty cases at North Brother Island during his service there. If a case occurring in a tenement were reported early, and the tenants were at once vaccinated, there would be no danger of its spread. One woman developed the disease five days after exposure, while in the case of a man the period of incubation had been twenty-one days. The treatment had been symptomatic, as in all zymotic diseases. For headache they had used phenacetine or bromide of sodium. Nothing did any good in preventing pitting. Subnitrate of bismuth, zinc powder, or starch might be applied.

It had not been his experience that bovine virus was more severe in action than human virus. He had vaccinated twenty thousand children, and while sometimes abscesses or other trouble occurred, it could readily be accounted for by want of cleanliness on the part of the children and parents. There was no danger of communicating disease from others. But one needle and one quill was employed for each child. Vaccination should be practised every six or seven years, and if there were recent exposure, try again. Doctors and parents were apt to think if there were failure twice the person could not be successfully vaccinated, but this might be a mistake, and one should try time and again. He had once failed six times and succeeded the seventh.

Some Odd Experience with Small-pox.—Dr. A. L. Gihon, U.S.N., had seen a great deal of small-pox, it being a common disease in the navy. He had spent six years in Chinese and Asiatic stations, where it was an every-day affair. In Mexico, to-day, it was about the same, and the Health Officer in Texas complained bitterly about the disease being brought across the border. As to treatment, he did not think it had much influence on the mortality-rate. Fatal cases could nearly always be pointed out as soon as the eruption appeared. Vaccination was a much more serious affair than had generally been supposed, judging by the careless manner in which it was practised. It was very important to have a proper virus to avoid danger. He had been told that he was himself vaccinated when six months of age. That many sores and abscesses followed. He nearly lost the hearing in one ear, and was to-day somewhat deaf on that side. Eleven days after the birth of his youngest child he met an old friend, one of the most eminent physicians in Philadelphia, who said he had just got some excellent virus and would go up and vaccinate the child. He did so, and it had undoubtedly resulted in arresting the development of the child for a long time.

Once, at Shanghai, he selected an old man as nurse because he was terribly pitted from small-pox, yet he contracted the disease and had a severe attack. The old fellow was delighted that he had got it, because, as he thought, "it would level off the lumps." One person there who had escaped small-pox was then vaccinated and died of the disease.

Dr. Turner had been brought in most intimate contact among eighty cases of small-pox, even acting part of the time as nurse, and did not contract the disease, and making the remark on board vessel that he had not been vaccinated since childhood, he concluded to be revaccinated, and it proved successful.

The President made a few remarks, advising, especially as there was some public opposition to vaccination, care against accident.

The author then closed the discussion.

Medication in Lieu of Physical Restraint in the Treatment of the Insane.—This was the title of a paper which was to have been read by Dr. Trautman, but, as he was not present, Dr. M. D. Field made some remarks upon the subject. Non-restraint, he said, had spread rapidly a few years ago, and ran rampant until not long since it had been regarded as an awful thing to mechanically restrain the insane. More recently the pendulum had begun to swing back. The truth was that any care of the insane implied some restraint. When mechanical restraint became unpopular, resort was had more often to drugs, and the advocates of these two methods had waged war with each other in a mild way for some time. Those who were opposed to mechanical restraint had claimed that it did much injury by being necessarily left largely in the hands of assistants, whereas those who favored it retaliated by charging the other party with overdosing with dangerous drugs in order to secure quiet and submission on the part of excitable patients. There were instances in which one or both forms of restraint were necessary to prevent the patients from doing themselves or others injury. It was possible to get along without mechanical restraint, and it had been done, but a greater evil resulted. Chemical or

drug restraint, if kept up long, would incur much danger. The speaker thought a combination of the two methods best, but better still was a good classification of patients, such as they had in the institution at Washington, and then apply such therapeutic measures as massage, hydrotherapy, employment, and exercise, which would go far toward preventing the restlessness and excitement that called for artificial restraint.

Dr. Williams said the last speaker's views corresponded with his own. They who were in asylums realized, as those outside apparently did not, that they had first to treat the insane, and second, to treat the friends of the insane. To treat the friends of the patient was often more difficult than to treat the patient himself. He believed it was the friends who had made more ado about restraint than had the patients, and superintendents had at times been led to do away with mechanical restraint entirely, not because it was best for the patient, but because it was necessary to be able to say that no restraint was employed in the institution. While mechanical restraint had been abused at times in the past, yet a worse abuse was taking its place where it was entirely abolished, namely, the over-use of drugs. He thought that personally he would rather be knocked out with a club than with hyoscyamin or even hyoscine, and patients who had taken sufficient doses to render them tranquil had told him the same thing. The tendency often manifested to fight assistants when these had to keep patients from injuring themselves, drugs and mechanical restraint not being employed, was apt to lead to a prolonged struggle, which the application of a restraining cloth would immediately overcome and secure quiet.

Adeno-sarcoma of the Neck.—Dr. Edward von Donhoff presented what presumably was an adeno-sarcoma, removed in several pieces from the clavicular region of the neck and anterior mediastinum. The operation was successful, although he thought he might have been afraid to undertake it had he known beforehand, as he learned afterward, that a surgeon had refused to operate upon the woman in his private hospital because of the danger.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PUBLIC HEALTH AND HYGIENE.

Stated Meeting, April 19, 1893.

S. T. Armstrong, M.D., Chairman.

Report of Committee on Coroners' System. — The committee appointed at the previous meeting to report upon the coroners' system consisted of Drs. Stephen Smith, John W. Brannan, and F. H. Dillingham. In order to do away with the office of coroner it had been found that the State Constitution would have to be amended. Therefore a bill had been drawn up for presentation to the Legislature, which, while retaining the office of coroner, would practically transfer the medical duties of this office in New York City to inquest physicians to be appointed by the Board of Health. The bill, which was drawn up in detail, proposed that the Board of Health appoint five physicians, who should be called inquest physicians, one to be called whenever there was a sudden, violent, or suspicious death. He should investigate the cause of death, and if he thought a further investigation necessary, he should make it in the presence of two or more witnesses, make an autopsy, take notes of all the facts and circumstances, and if at its conclusion he should be of opinion that death had been caused by violence, he should notify one of the coroners, who should then act, using the inquest physician's report as evidence and calling any other witnesses if he thought it necessary. The coroner was to return his report to the District Attorney. The coroner was to be elected, but must be a qualified lawyer. If the services of a coroner could not be secured within twelve hours a police justice should act. The inquest physicians were to receive a salary not to exceed four thousand dollars each, and they were to have a clerk whose salary was not to exceed two thousand.

On motion the report was accepted, the committee discharged, and the report was referred to the Academy for action.

Dr. Walter Voight, who was to have read a paper upon the subject, "Some Reasons Why the Present Coroners' System should be Altered," said he had not had time to prepare a full paper but read some notes in which he mentioned the fact that abuses in connection with this office were evident to every citizen who read the daily papers. But unfortunately the public press did not aid in reforming this abuse, as it did many others, because, as one editor had told him, if they said anything against the coroners' system, they would be denied a certain kind of news which at times they were glad to obtain.

The Importance of the Coroner's Office and the Propriety of Increasing its Usefulness.—Dr. Alexander Hadden read the paper. The importance of the coroner's office was made manifest by a brief recital of the functions which it had performed since it had been established in England about a thousand years ago. It was not only a common-law legacy in this country, but had been made statutory by all the States of the Union and had since been abolished by only two, namely, Massachusetts and Rhode Island. Whether these States would profit by the change had not yet been proven. At any rate, he would regard legislation in the same direction by New York at present to be unwise and rash. It would lead to doing away with a prompt preliminary criminal court of wonderful activity and power, one which might properly be called an emergency court, dividing its duties among departments which were slow and uncertain in their processes. To assign any of the duties of this office to the Department of Public Health in this city would, in his opinion, be a mistake. The Department of Public Health was not a unit, and although carrying heavy burdens, it was weak. To illustrate this, who had heard of its taking any efficient action during the past winter against the filthy streets of the city, or against the primitive methods of removing stable and house refuse? No medical men were better qualified for the position than those on the Board of Health, but they had not the power to enforce sanitary measures against other public departments. He was, therefore, opposed to putting the duties of coroner into its hands. On the contrary, he thought it would be wiser to put the duties of the Health Board into the hands of departments with more certain powers. Better results would be obtained, in his opinion, by transferring the duties of the Board of Health, excepting those relative to vital statistics, to the Department of Public Works, this latter having now charge of the water-supply, of grading and paving streets, etc., matters intimately related to the sanitary condition of the city. The same department should absorb that of street cleaning.

Finally, as to widening the duties of the coroner, he would give him charge of the Bureau of Vital Statistics. A considerable part of the paper was devoted to pointing out the desirability of complete vital statistics, but more especially of the births. The registration of births at present was extremely defective. The parents should be required to make the registry, and should receive a certificate which should be kept as evidence of citizenship. It was very inconvenient to undertakers and others to communicate with the department in Mott Street, and there should be numerous stations throughout the city, say at police stations, where registry, etc., could be attended to.

The Chairman remarked that inasmuch as the duties of the office of coroner had not been discharged altogether satisfactorily, limited as at present, it would be doubtful whether the vital statistics would fare better under the change suggested by Dr. Hadden.

The question, however, was open for discussion.

Dr. Edward Kershner made a vigorous protest against the present system existing in New York, and throughout the States, and in the national government, of leaving things pertaining to sanitation in the hands of those ignorant of their duties—those who were not physicians. The medical profession should insist upon their

rights, which were the people's interest, and demand that such offices as coroner, water commissioner, etc., be filled by medical men. As long as men were allowed to fill such places who were ignorant of sanitary knowledge, just so long could we expect crime to run rampant, disease-breeding filth to lie in our streets, germs of typhoid fever and cholera to pour into our water-supply, and disease and death to punish us for our indifference.

Clinical Department.

SACCULATED BLADDER FOLLOWING SUPRA-PUBIC CYSTOTOMY.

By E. F. TUCKER, M.D.,

PORTLAND, ORE.

On the 23d of last January, Mr. I——, a Swede, thirty-six years of age, came to me complaining of a stone in the bladder. He gave the following history: About twelve years ago he was first troubled with "bladder complaint," which gradually grew worse until two years ago, when a stone was detected in his bladder, which shortly afterward was removed by supra pubic cystotomy. Since that operation he had been perfectly well until within a month, when all his old symptoms returned, with the exception that interference with the act of micturition had not bothered him as much as previously.

On passing a Thompson searcher into his bladder, the instrument at once came in contact with a stone, which seemed to be a small one. Just above the pubes was the scar of the cystotomy, about two inches and a half long, and an inch and a half wide. I at once proposed litholapaxy, which he agreed to. I then examined his urethra and found several strictures, the smallest of which was two inches and three-fourths from the meatus, and just admitted a No. 22 French bougie-à-boule; the right lobe of his prostate was also slightly enlarged; this latter condition was, however, much more apparent later on, when I came to use the lithotrite.

The patient was in a great hurry for his operation on account of his business engagements. I persuaded him, however, to wait a while in order to give me an opportunity to dilate his strictures and get his bladder into proper condition. On February 26th, his urethra admitted a No. 26 French sound without trouble, he having in the meantime been instructed to wash out his bladder, at first every other day, and later every day, only coming to my office to have sounds passed. He now insisted on having his operation at once, as very shortly he would not be able to take the time from his business to undergo an operation. I sent him at once to the Good Samaritan Hospital, in this city, promising to operate on the following day. I will state here that I had been somewhat worried, owing to the fact that at no time since my first examination had I been able to detect any stone; but being positive as to its presence there, I knew that it must be there, and that I would probably have no difficulty in finding it at the operation.

Accordingly on the next day, the patient being placed under an anæsthetic, I proceeded first to divide his strictures up to No. 34 French scale. His bladder being then emptied, washed out, and a few ounces of borax solution thrown in, I introduced the lithotrite. For some time I was considerably embarrassed by not finding any stone. While manœuvring the instrument, its point directed toward the perineum, it seemed at last to trip over something and pass about two inches further into the bladder, and immediately it came into contact with a stone, which was readily seized and broken. The individual fragments were, however, very difficult to find, owing to this posterior pouch, and also another, discovered later, which seemed to exist on the left side of the bladder. I tried during the operation to obliterate these pouches by distending the bladder, but this was of no avail; and even when the bladder was empty, the handle of the instrument being depressed, its point could readily be felt under the scar on the belly-wall. It was two hours before I felt satisfied that all fragments had been removed from the bladder; but in this I was disappointed, as two days later a good sized fragment lodged in the urethra about two inches from the meatus, which I was obliged to crush with a pair of dressing forceps before I was able to dislodge it. The patient left the hospital at the end of the week and returned to his business in ten days, feeling perfectly well; and he has remained so ever since, gaining considerable flesh. The only rise of temperature which he had occurred on the evening of the third day, when it rose to 103° F., probably owing to the fragment of stone which was lodged in his urethra for several hours before it was removed. The dried fragments of the stone weighed 122 grains and proved on examination to be of a mixed character.

The particular points of interest in this case were two. The first was the sacculated condition of the bladder, which seemed to me very likely to be due to the supra-pubic cystotomy, as the bladder in this case had evidently remained adherent to the abdominal wall above the pubis, from which, when empty, it seemed to hang in folds. The second point was the short time that had elapsed from the first operation to the last, being just eighteen months; during this time the stone must have formed, although the symptoms had only appeared within a month.

INTERNAL ANTISEPSIS IN A CASE OF TYPHOID FEVER.

By CHAS. G. AMENDE, M.D.,

NEW YORK.

The patient, Mrs. H——, was a robust woman, aged twenty-eight years; two children; weight some time before the attack, one hundred and seventy-eight pounds.

The diagnosis of typhoid fever rested upon high fever on the first day, unaffected by a large dose of quinine; copious ochre-yellow watery and involuntary stools appearing on the second day; a cluster of the characteristic petechiæ on the left upper epigastrium fully establishing with the fourth day. All other symptoms were, as will appear below, either much broken up or abbreviated. The pulse ranged at first from 100 to 116, and the temperature from 102° F. to 104° F. The treatment was as follows:

August 24th, 2 doses of 10 grains each of muriate of quinine. August 25th to 30th, 8 to 9 capsules daily, each containing 5 grains of muriate of quinine, 5 grains of subnitrate of bismuth, and ½ drop of creasote. August 30th to September 3d, 8 or 9 capsules with the same amounts of quinine and bismuth, and ⅓ drop of creasote. September 4th, 7 such capsules. September 5th, 6 such capsules. September 6th to 9th, 3 capsules with the amount of creasote decreased to ¼ of a drop, quinine and bismuth the same.

The small tenement allowed no baths; instead frequent cool spongings, moderate use of stimulants.

Lemonade allowed on the 26th and 27th; was followed by increase of the involuntary passages, whose number had been less on the 26th. Simultaneously pain in the duodenal region; subsiding, though, soon to tenderness on deep pressure. Very little intestinal gurgling. At no time was there any tympanites or abdominal expansion, but a rather sunken condition of the abdomen.

From the 26th to the 28th there was some delirium at night, with impairment of hearing and of speech; the tongue was quite swollen, and there was an inflammatory condition of the oral and of aural structures.

A gargle of a concentrated solution of boracic acid and chlorate of potash was given, at first hourly, with the result that the œdema of the tongue and the inflammatory condition of the adjacent structures disappeared in a few days.

The stools became firmer on August 30th; the next day they could be retained by will, and were only three.

Appetite returned on September 1st, but pancreatized milk only would be retained for several days.

The patient arose the first time on September 5th, and regained strength rapidly.

Falling out of the hair persisted for a long time, the patient refusing shaving of the head.

The bismuth was added in the capsules to dilute, so to speak, the creasote, and to effect its more general distribution.

266 West Forty-Second Street.

A RECENT CASE OF APPENDICITIS.

By CHAS. G. PLUMMER, M.D.,

SALT LAKE CITY, UTAH.

Mr. W. H. H——, aged twenty-six, single, usually in comparatively good health, lives in Chicago, and travels for a wholesale drug house there. Early in December, 1892, I became acquainted with him, when he volunteered the history of a serious illness he had had during the summer of 1886, in Chicago. Since that time he had been able to locate a tender place low down in the abdomen on the right side. At his suggestion I made a physical examination with the following results: Exactly beneath McBurney's point was found a tender, somewhat swollen area, which, upon pressure gave considerable pain. Percussion over this point elicited marked dulness. Examination per rectum revealed a mass about as large as a small apple, though somewhat flattened. Constipation was the rule, requiring the use of large doses of cascara. With these and other prominent symptoms I made a diagnosis of chronic appendicitis.

I might say at this point that, during all the years that had elapsed since his first seizure, he had had periodical attacks of pain, etc., accompanied with constipation, and only the closest attention to his bowels saved him from more severe illness.

Considering the fact that he was on the road most of the time, that the jar of the moving train was a constant source of irritation, and lastly, that sooner or later he would be taken suddenly ill, probably a long way from home, I advised him to take the first train for Chicago, consult a prominent surgeon whom I recommended, and be operated upon at once. The idea of immediate operation, when in comparatively good health, was not very acceptable, but he acted upon my advice, was examined and told that he was suffering from renal colic.

Of course he was surprised, but accepted the diagnosis with great relief to his mind, was ordered home and put to bed, with hot applications over the abdomen for a week. At the end of that time he felt somewhat better.

He visited our city on his next trip West, about March 1, 1893. When I met him he told me everything concerning his treatment in Chicago. He still complained of considerable pain and tenderness, and at times was quite uneasy concerning himself. I stoutly maintained that my former diagnosis was correct, and as I did not care to make a second examination, I suggested the advisability of calling in some other practitioners to verify my diagnosis. He consented, was carefully examined, and all pronounced it appendicitis.

He at once set the date for operation as March 11, 1893. The patient was prepared in the usual way for laparotomy. Dr. A. C. Ewing administered the ether, and with the kind assistance of Drs. E. V. Silver and T. B. Beatty, the abdomen was opened by an angular incision, taking McBurney's point as the centre of the incision. Almost the first thing that came into view in the field of operation, was the enlarged, strangulated appendix vermiformis. It was immediately caught up, transfixed with a heavy silk ligature, and tied off with a Staffordshire knot. The thermo-cautery was carefully applied to the stump. The mass of exudate that had been made out at the time of the examination per rectum, proved to be adhesions, thick and fibrous and of long standing. The abdomen was ready to close in fifteen minutes after the first incision was made, but a little spurting point in the stump necessitated ligation and a second application of the thermo-cautery. The stump was dusted with iodoform and dropped back into the abdominal cavity.

The operation field was cleansed and the abdomen closed with silver-wire sutures, retained by shot and a plate. Several apposition sutures of heavy catgut were employed and the skin closed with a continuous suture of fine catgut. The wound was dressed in the most approved manner.

The patient rallied well, and was only nauseated by the ether for a few hours. At no time subsequent to the operation did his pulse rise to 80, and his temperature reached 99½° F. once, due entirely to reaction. The silver-wire sutures were removed on the tenth day, when we found the union perfect and the wound dry and sweet. He has made a rapid and uninterrupted recovery, and is now, nineteen days after the operation, riding out and walking about, feeling splendidly. He lost ten pounds during his confinement to the house. The appendix was filled with a thin sero-purulent fluid, and could not have gone much longer without rupturing. It was semi-circular in form, four inches in length, and almost two inches in circumference.

The case and result simply add more weight to the argument that the time to operate is in the interim between attacks (if the patient survives the first seizure), and not to wait until perforation occurs, when the patient is practically at death's door.

One of the most interesting features in regard to this case is the great length of time intervening between the initial attack and the operation for relief. We would almost believe it impossible that a case could go so long (nearly seven years) without suffering a second serious attack. It is more than likely that his great care of his bowels, relieving them almost daily, is what saved him.

It may seem to the laity that the profession is going too far to advise operative procedure in these cases when the patients are comparatively well; but I believe it to be good surgery, and that it would result in saving many lives now sacrificed on account of delay in operation.

THE TRACHEA OPENED LONGITUDINALLY FROM A POINT JUST BELOW THE ISTHMUS OF THE THYROID TO ITS BIFURCATION, AND A FOREIGN BODY REMOVED FROM THE LEFT BRONCHUS.

By JOSEPH WILLIAM STICKLER, M.D.,

ORANGE, N. J.

A few weeks ago Dr. T. B. Lane asked me to perform tracheotomy on a patient who had membranous croup. The child was about three years old, and had a short, thick neck. When placed upon a table, a roll of woollen properly adjusted under his neck, and chloroform administered, the trachea was opened just below the isthmus, and a tube of medium size introduced. The condition of the child improved very quickly, and everything progressed favorably, till one of the attendants detached a bit of iodoform gauze from a probang, to which it had been insecurely tied, while attempting to cleanse the trachea. The gauze quickly passed into the left bronchus. The breathing at once became labored, and the child cyanotic. It was inverted, and various means used to displace and remove the foreign body, but to no purpose. I then told the family there was but one operation which promised any relief, and that was one attended with some risk to the child. The procedure was explained as clearly as possible, and consent was given to perform the operation. The child was placed in the usual position for tracheotomy, chloroform being given by Dr. Lane, and the tracheal wound already made was exposed by removal of the tube. Grasping the trachea with forceps upon either side of the wound, the opening was somewhat increased in size, and the trachea lifted upward by lateral and upward traction.

The soft tissues were then quickly divided in the median line down to the sternum, and deeply enough to expose the anterior surface of the trachea. Bleeding vessels were at once seized with forceps. With the index finger as a director and guide, the trachea was divided anteriorly down to its bifurcation. The little finger was then introduced, first into the right, then into the left bronchus, but the gauze could not be felt. I next passed the angular blades of a pair of forceps into the left bronchus, and, after one or two attempts, removed the plug of gauze. The breathing at once became easy, and the cyanosis disappeared. The tracheal and superficial incisions were brought together with sutures, the tracheotomy tube re-introduced, and the patient treated as before the accident and operation.

I call attention to this case because it demonstrates the fact that an operation similar to the above, or a tracheotomy low down in the trachea, facilitates the removal of foreign bodies which have found their way into the bronchial tubes.

Correspondence.

OUR BERLIN LETTER.

(From our Special Correspondent.)

FURTHER REPORT OF THE INFLUENZA BACILLUS—NATURAL AND ARTIFICIAL MINERAL WATERS—PROFESSOR LEYDEN ON DIABETES—HOW SHOULD THE NEWLY BORN BE CLEANSED—TUBERCULINUM REDIVIVUM.

BERLIN, March 25, 1893.

DR. PFEIFFER, the discoverer of the influenza bacillus, recently published, in the *Zeitschrift für Hygiene*, a complete report of his investigations, which reiterates much of what has already been published, and explains more fully certain points. For example, Pfeiffer found the bacilli in the expectoration of patients afflicted. Since they are found in the expectoration only, one is led to suppose that the respiratory tract is primarily affected and infected, and that the transmission of the disease is the result of the dissemination of diseased products from one human being to another. Pfeiffer laid much stress on certain specimens from grippe patients examined by Dr. Kirchner in which were found bacilli wanting elsewhere, to which Kirchner did not attach any value. Pfeiffer found these to be the real cause of influenza. They were most easily found in the expectoration from the deeper portions of the lungs where they are not only very numerous, but often in pure culture, whereas, in the upper portions of the respiratory tract, they have other bacteria associated with them. They are most easily found in the purulent portion on the inside or centre of an expectorated mass. The staining is best accomplished with a very dilute solution of carbolic-fuchsine in water. As the bacilli stain slowly, it is necessary to keep them from five to ten minutes in the staining fluid. They abound in the mucus and in the protoplasm of the pus-cells. He next proceeded to culture methods and found numerous obstacles. Inoculation of agar with sputum gave rise to colonies which could not be further developed. Successful results were obtained when blood was added to the nutrient medium, and it was further found that these bacilli required the hæmoglobin for their propagation. The best result was obtained by the admixture of pigeon-blood, as the latter yields the hæmoglobin easily. Besides finding the bacilli in the respiratory organs, Pfeiffer found them in the liver and spleen, but sparingly; but the most careful examination never showed their presence in the blood of grippe patients.

As to their vitality Pfeiffer found influenza bacilli to be exceedingly sensitive to dryness. They also die rapidly in drinking-water whereas they remain in nutrient media, and also in moist expectorations as long as fourteen to eighteen days.

Pfeiffer sums up his views as to the transmission of the disease in the following manner:

1. The development of influenza bacilli outside of the human body in soil and water is impossible.

2. The spreading of the disease through dried expectoration mingled with dust is very unusual.

3. The contagion is in the moist secretions of acute cases, and is found in the nasal and bronchial mucous membrane of influenza patients.

Inoculation experiments were tried on mice, rats, guinea-pigs, rabbits, pigs, dogs, cats, and monkeys. Successful results were attained only on monkeys, but the question of the transmission of the disease to animals is still unsettled.

The severe form of influenza affecting the central nervous system, Pfeiffer believes to be due to a general infection and the result of poisoning by ptomaïnes produced by the influenza bacilli. It will be of interest to note that Pfeiffer's results correspond with what has been proven by careful clinical observation elsewhere.

At the Balneological Congress, which was recently held, some good, as well as many poor, papers were presented.

Professor Liebreich, of Berlin, read a paper on "Natural and Artificial Mineral Waters." The author believed that artificially prepared water can never be like natural water. The water itself is so different that imitation of it is impossible, either in its chemical or in its physical properties. Besides, as there is no legislative control of the matter, anybody can manufacture mineral water with a result which can easily be imagined. There are numerous constituents left out, and only certain salts which are naturally present in large quantity are added. As a result of this a decided action is frequently prevented by the absence of a given substance.

Professor Leyden spoke about diabetes. After giving the theoretical data relative to the treatment of this disease the speaker said that the disease itself cannot be cured, for, although the quantity of sugar can be reduced and its excretion probably arrested by dietetic and balneological treatment for a limited time, he believed the diseased condition was not much changed. He believed the treatment should be supporting, and aimed at strengthening the general constitution. In order to do this, it is advisable not to be one-sided, and to aim only at reducing the quantity of sugar, because it must be conceded that diabetics absorb a certain quantity of sugar and other carbohydrates, besides being able to form sugar and albuminoids. Very strict dieting is therefore injurious. The bath treatment, as at Carlsbad or Neuenohr, acts well, owing to its moral influence.

Professor Liebreich mentioned some very interesting points in connection with bathing and rubbing the newly born. The vernix caseosa which has heretofore been regarded as a superfluous filth, cannot be taken as such. Liebreich carefully examined this substance, and found that it is not a glycerin fat, but that it consists of cholestearinæther. This later substance is germ proof and air-proof. If gelatine be covered with a layer of ordinary fat, and then with a layer of cholestearinæther, it is found that bacteria will penetrate the layer of fat but never the layer of cholestearinæther. From this we conclude that nature has given the child a natural protection against bacterial infection and we should, therefore, not interfere with it.

The first bath ought to be carefully attempted so that a reasonable quantity of the vernix remains to protect the pores of the skin. The soap used should be very mild, with almost a neutral reaction, and the child be most carefully dried.

Although the tuberculin period is looked upon as a thing of the past, we still have occasional reports of cures resulting from Koch's tuberculinum. I have been watching these publications from time to time, and must confess that the present objective methods of investigation are far more careful than were those in the past.

In a paper recently read by Dr. Thoener, of Berlin, in the "Verein für Innere Medecin," the author reviewed the numerous mistakes which he believed were due to a

misapplication of the remedy. He has used the remedy in acute, and also in very advanced cases of tuberculosis, and found the following benefits which he attributes to the tuberculin:

1. In commencing tuberculosis, disappearance of all symptoms in the lung, absence of cough, absence of sputum, disappearance of bacilli, gain of strength, better general appearance, and increase in weight.

2. In advanced cases of pulmonary tuberculosis, although no positive cure was attained, yet he observed a disappearance of hæmoptysis which for years had occurred every few months; furthermore, there was a general improvement in the sputum and cough, without a complete disappearance of bacilli. An almost constant diarrhœa, evidently due to an intestinal tuberculosis, stopped suddenly. Coexisting laryngeal tuberculosis was also greatly benefited, coexisting night-sweats disappeared, fever subsided, nourishment was more readily taken, the strength was increased, and the subjective condition was greatly improved.

The author applies the remedy in the following manner: He begins with $\frac{1}{20}$ milligr. if the patient has fever or not, giving the first ten injections every forty-eight hours. The dose is increased regularly by $\frac{1}{20}$ milligr. at each succeeding injection, so that the patient does not receive $\frac{1}{2}$ milligr. at a single dose until the end of the third week. After ten more days of treatment, or after about four weeks, the patient receives about 1 milligr. At this dose, if the patient have fever, the injections are discontinued. From this time on the patient not having fever receives but two injections weekly, and at each injection the dose is increased $\frac{1}{5}$ milligr. After six and a half weeks of treatment the dose is 2 milligr. From now on, each single dose (2 milligr.) is increased $\frac{1}{2}$ milligr. and after three weeks (in all nine weeks and a half, since the beginning of the treatment) we arrive at the final dose of 5 milligr. In this manner of cautiously injecting the tuberculin, we do not excite febrile reactions even in advanced cases of tuberculosis, but we do find a gain in bodily weight. After this plan of treatment the speaker watches the indications of the patient. If he has been greatly improved and is in the condition of primary tuberculosis, when a cure may be hoped for, the speaker increases the dose frequently to 5 ctgr. Beyond this latter dose he did not go, and he also frequently suspended treatment when arriving at the latter dose, and recommended it if found necessary after a few months' interval of rest, by giving 1 milligr. and now advancing the dosage much more rapidly.

Patients in an advanced state of tuberculosis require more cautious increase in the dose of their injection, and it is advisable to suspend treatment when symptomatic improvement has been achieved. In this manner patients can be attended outdoors, and also allowed certain occupations. In a few instances paleness of skin, loss of appetite and fever were noticed during the treatment. In the latter case it is advisable to suspend treatment, and recommence after a time with very minute doses.

The Treatment of Scabies at the Hospital St. Louis, in Paris.—Dr. Dawson, writing to the *Montreal Medical Journal*, thus describes the mode of treatment for itch in use at this hospital. The patients strip and are directed to rub themselves thoroughly for ten minutes with "Savon noir," a semi-soft potash soap, with which they are provided in ample quantity. They next spend forty minutes in a warm bath, where the soap is allowed to dissolve without friction. After this they are rubbed from head to foot with an ointment containing sulphur and mercury, which is to be allowed to remain on, under the clothes, for twenty-four hours. Next day they return for a warm bath, and at the same time have their clothes disinfected. Upward of fifty patients undergo this treatment daily, and, as might be expected, tender skins sometimes suffer somewhat severely, and secondary eruptions are not uncommon.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 22, 1893.

	Cases.	Deaths.
Typhus fever	14	4
Typhoid fever	20	10
Scarlet fever	162	19
Cerebro-spinal meningitis	15	10
Measles	151	5
Diphtheria	97	36
Small-pox	6	3
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

The Petroleum Treatment of Diphtheria.—In the third number of the *Normandie Médicale* Dr. Flahaut relates the history of an epidemic of diphtheria that occurred at La Neuville—Champ-d'Oisel—in 1891–92, seventy persons being attacked. In the first and earlier series of cases (thirty) reported the usual topical treatment (carbolic acid, sublimate, salicylic acid, etc.) was followed, with the result that nine out of the thirty patients died. For the remaining forty, local applications of petroleum were employed, all the cases recovering. From the day on which this new treatment was instituted the mortality became suddenly *nil*. M. Flahaut says: "I commenced this mode of treatment on a little girl whose fauces, tonsils, and soft palate were covered with thick false membranes. From the very first application of the petroleum the membranes were seen to whiten, retract, and almost dissolve under the brush. The same evening she breathed more easily and expelled some membranous exudations. Five days later the child was, if not absolutely cured, out of danger, and complete recovery was only a question of time. From that time forth I employed petroleum locally in all my cases and I congratulate myself on having done so, since they all recovered." A throat brush dipped into the petroleum and shaken free of any excess of the liquid is passed every hour or every two hours, according to the gravity of the case, over the parts covered by membrane. The application is said not to be painful—on the contrary, it produces a soothing effect. The only drawbacks are the disagreeable taste and odor of the petroleum. Membranes expelled by patients and received into capsules containing petroleum are almost totally dissolved after a gradual process of disintegration. The treatment lasted on an average a fortnight, at the end of which recovery generally occurred almost suddenly. The diagnosis was confirmed by the discovery of the Klebs-Loeffler bacillus and by the supervention in several instances of complications and sequelæ, such as bronchitis, broncho-pneumonia, paralysis and albuminuria.—*The Lancet.*

Columbia College General Catalogue.—At a recent meeting of the Trustees of Columbia College, the publication of a new General Catalogue of officers and alumni was authorized, and a committee, consisting of Professor J. Howard Van Amringe and Mr. John B. Pine, clerk of the board, appointed to prepare the same. The new edition will be the eleventh since the foundation of the college. It is the intention of the present committee to supplement the names of living alumni with their addresses and with such further information as may properly enter into a work of this description, including the professions of the men, their degrees, colleges where same are granted, their titles, judicial, military, clerical, or political, etc. While the committee is in possession of the present addresses of a great number of the alumni, the list of graduates whose whereabouts are unknown is still

appallingly long. To locate these men will be a difficult and troublesome task, which can only be accomplished by patient and persistent effort on the part of the committee, and by the cordial co-operation of the alumni themselves. The committee therefore appeal to every alumnus of the college, no matter of which school, to assist them with whatever pertinent information may be in his possession. It will at least be possible for every graduate of Columbia who reads this, to forward to the committee his own name, class, and present address, with such other facts regarding himself as he deems material. The list of the missing among the graduates in medicine is especially lengthy. Physicians holding diplomas from the Medical School are most urgently requested to respond. The committee will also be glad to receive information: 1, of any living graduate known to be now residing or practicing his profession outside of the United States, with his address and class, when known; 2, of the death of any graduate occurring within the past five or six years, date and place, when known; 3, of recent changes of address among alumni; 4, of anything else suggested by the above description of the committee's intentions. All correspondence may be addressed to the Committee on the General Catalogue, Columbia College, New York City.

Hay Fever is said to be benefited in many cases by means of equal parts of laudanum and spirit of camphor painted over the nasal mucous membrane. Combined with this is the internal administration of small doses of Fowler's solution.

Pseudo-chancre Redux, or chancre-like syphiloma of Fournier, is a late manifestation reproducing absolutely the appearances of an initial lesion, and as it is sometimes accompanied by a generalized eruption, has been mistaken for an evidence of reinfection. According to Morel-Lavallée, the lesion is chronologically a secondo-tertiary one and is of the nature of a tuberculo-gummous syphiloma.—*Journal of Cutaneous and Genito-urinary Diseases.*

A Model Subscriber.—Dr. N. J. Thompson, of Graball, Tex., upon being sent a bill for *The Texas Health Journal*, writes: "Your notice of subscription was a surprise to me, as I have not received *The Journal* for four years. Fours years ago my post-office was changed to Graball, Washington County, and as I had not received *The Journal*, I supposed that you had long since discontinued it. However, as it was *my fault* that I did not notify you of the change, I herewith inclose amount of subscription, which is $7.00." May the Lord continue in the future, as He is at present, with Dr. Thompson. Although the doctor had not received *The Journal*, he, being an honest man, the noblest work of God, sends the amount and admits that it was his "fault" that *The Journal* address was not changed. We know of some fellows whom this statement should make ashamed.—*Texas Health Journal.*

Jamaica as Seen by a Physician and Pharmacist.—Dr. G. H. Summers, says: "I am now on a trip through the tropics, and having a most delightful and successful time. These islands (Jamaica) are rich in medicinal plants, many of them such as the nux-vomica, nutmeg, cinnamon, clove, cacæ theobroma, gamboge, tamarind, annatto, coca, cinchona, etc., being really beautiful to behold. Many, very, very many of our beautiful shrubs and hot-house wonders at home are veritable weeds here, crotons and kolios (I think I have spelled the latter right), begonias and geraniums, frangipanni, jessamine, stephanotis, and other such plants in innumerable variety are seen on every hand, mingled with beautiful orchids and delicate ferns, and all as wild as our now fashionable field daisy. This Jamaica is a beautiful place and I wish that all of my friends of the States could go over the ground I am now traversing, for the second time."—*Druggist.*

Intestinal Parasites in Man.—According to statistics collected by Beranger-Feraud in regard to the number of tæniæ present in any one case in man, it would appear that one parasite only was present in 87 out of 100 cases, while anything beyond this was quite exceptional. In 52 out of the 100 cases the tænia was at least 5 metres in length; in 39 it was from 6 to 10 metres; and in six instances it was from 11 to 15 metres. The author relates a remarkable case of a marine engineer who had become infected with tæniæ while at Madagascar, and who after treatment voided three enormous examples of this parasite, measuring respectively in length, 37, 43, and 74 metres, and weighing 197, 276, and 449 grammes each. By a little calculation it will be seen that this patient at one time carried about with him in his intestines about 170 yards of parasites, weighing 922 grammes.—*Medical Press.*

Strike of the Machabee Men.—A formerly thriving trade has come almost to a standstill in consequence of insufficient remuneration to those engaged in it. There is, in Paris, a class of men whose time is spent in dragging the Seine for dead bodies. The city pays fifteen francs for each body found and taken to the morgue, but lately the fishers of the dead have had to wait so long for their pay that they threaten to abandon their trade and leave the dead undisturbed in their watery bed. Three dollars for a "machabee," as these bodies are called, is, they say, a small enough price, and when the finders have to wait months for their pay they feel that their time and labor are wasted. In good times, however, the trade is well worth following, for the Seine is as full of dead as of fish. One "machabee man" has pursued his calling for upwards of a quarter of a century and has made a fairly comfortable living from it. He is not a very steady worker, but when he sets himself to work with his grappling-irons he frequently gets three or four corpses in a single day.

Ancient Egyptian Cosmetics.—Professor Bäyer, of Munich, has been making researches in the tombs of Achmin, and has found upon the mummies of some of the Egyptian princesses numerous vials of cosmetics used by the noble dames some thirty centuries ago. He has analyzed these lotions and determined their composition, and now proposes to give the results to an expectant world for the benefit of the beauties of our own time.

An Insinuation.—The authorities at Dieppe have recently issued their annual instructions to the life-savers who patrol the bathing beach during the season. Among other rules is one instructing them, "when a lady is in danger of drowning to seize her by the dress, and not by the hair, which oftentimes remains in their grasp."

A Reaction Against Professional Fasting.—The "Moulin Rouge," in Paris, has recently added to its attractions a man who drinks eighty glasses of beer in an evening. A rival establishment rejoices in the possession of another artist whose special forte is the nightly consumption of a supper of eight eggs, six loaves of bread, four pounds of mutton or beef, three raw cabbages, and olives, pickles, and other appetizers *ad libitum*. They are said to draw greater crowds than Jacques or Succi could ever attract, and the managers of other establishments are scouring the city for big eaters and drinkers, offering high salaries for first-class gluttons. Fasters, in the meanwhile, are at a discount.

Suicide of an Abbess.—The Abbess of the Convent of la Trinidad, in Madrid, committed suicide recently by throwing herself from one of the windows of the building to the floor of the inner court. She had been acting strangely for several months, and the question of her sanity had been under discussion. She was sixty-three years old.

Pauper Relief in England.—£2,191,172 were spent by local Government relief boards in England and Wales during the last half of 1892.

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ACROMEGALY, WITH THE CLINICAL REPORT OF A CASE.

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AND

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Some years ago, Dr. Paul Marie, at that time Chief of Clinic under Professor Charcot, described a peculiar condition presented by two patients in the service, consisting in a notable symmetrical enlargement of the extremities and the face. This description,[1] which is classical and to which nothing material has since been added, although at present something like ninety cases from various sources have been recorded, led to many subsequent observations and to a number of theories as to the etiology of the disease. An important communication by Souza-Leite[2] gave abstracts of forty-nine cases, and was translated into English and published by the Sydenham Society. Recently, in the *Journal of Nervous and Mental Diseases*, December, 1892, the literature of the subject has been brought up to date by Dr. Joseph Collins, of New York, who gives a digest of all cases published subsequent to Souza-Leite's report and previous to June, 1892. Since that time perhaps a dozen have been recorded, and though the condition at first was considered absolutely rare, as in other similar instances, the diffusion of knowledge concerning it has led to the recognition of the disease in all directions. Dr. Collins also gives the bibliography of the subject in the same journal for February of this year, to which we are much indebted.

The disease presents, except in rare instances, no trace of heredity, but for the most part the subjects of this malady, at least in this country, have been in such a position that it is impossible to trace their lineage with any satisfaction. It appears usually at puberty or at the age of complete sexual development, between the twelfth and thirtieth years. In some instances it has seemed to be congenital, and in others it has appeared late in life. Among the cases so far on record there is a slight preponderance of males. As inciting causes, such a variety have been alleged or suspected that weight attaches to none.

Usually the hands commence to enlarge, and shortly the feet present a similar growth, followed in turn by changes of a hypertrophic nature involving the facial bones and soft parts, particularly the region of the frontal sinuses and the under jaw. Occasionally the bones of the thorax present similar features, and not infrequently the spine becomes scoliotic, presenting in marked cases a notable antero-posterior curvature in the upper dorsal region, giving rise to a well-marked hump. The involved tissues have a peculiar resilient, non-œdematous feel, do not pit on pressure, and palpably manifest the enlargement of the underlying bony structures as well as of the soft parts. The overhanging brow, the prominent malar eminences, the thickened nose and lips, the protruded and greatly enlarged chin, with the heavy expression and the exaggeration of the more prominent facial folds, gives a characteristic appearance to these patients which once seen can scarcely be subsequently misconstrued, and reminds one somewhat of the leonine expression that goes with leprosy, though more mask-like and expressionless. The scalp and ears frequently show similar changes, and many of these patients require to increase the size of their hats from time to time. Examination of the mucous membrane of the naso-pharynx, the fauces, and the mouth discloses a somewhat similar condition, and the low, guttural voice, as well as the actually increased size of the larynx indicates its hypertrophic involvement. Owing to the enlargement of the bony arches of the jaws, intervals appear between the teeth, which latter of course do not correspondingly increase in size. The tongue becomes voluminous and frequently shows on its dorsum, by the hypertrophy of the mucous structure, a rugous, corrugated appearance. In the case we have to report the tongue, when protruded and spread out, nearly covers the enormously hypertrophied chin, and in some instances reported it has been possible for the patient to lap the end of the nose with the tip of the tongue. The bones of the shoulder girdle, notably the clavicles, sometimes participate in the hypertrophic process to an extent that causes a broadening of the shoulders. The arms as a rule escape, though there may be slight enlargement at the elbows. But beginning with the middle of the forearm and extending to the tips of the fingers, the enlargement is pronounced, giving rise to the descriptions of these extremities as being battledore-shaped or spade-like. As the hypertrophy increases the strength diminishes, yet flexibility and precision of movements and co ordination are not affected. Sexual power is usually much diminished or entirely lost at an early period. On the palmar surface of the hand the integument is notably thickened and the ordinary folds become enormously exaggerated. The fingers, thickened in all directions, are well described as sausage-shaped; the nails correspondingly increase in size, but rather in width than in length, and frequently are coarse, thick, striated, and roughened. Indeed, all the dermal structures in the hypertrophied territory manifest this trophic disturbance by excessive growth, the cuticle becoming rough and thickened, the hairs harsh and bristly. In the feet and lower legs similar changes are produced, giving rise to greater length, width, and thickness of the feet, which present usually on the inner side, but sometimes on the outer margin, a peculiar thickened welt encircling the heel and running down the margin of the foot to the corresponding phalangeal joint. The toes show similar changes to those of the fingers.

In some cases, as first pointed out by Klebs,[1] there is a persistence of the thymus gland, which has been found once or twice post mortem, and suspected in some other cases by the post sternal dulness. Rarely the thyroid has been found enlarged, but as a rule, both during life and post mortem, it is notably diminished, and in some cases practically wanting. The spleen has been found hypertrophied, and all glandular structures, especially the ductless glands, have been found variously involved in the direction either of hypertrophy or of atrophy. This is particularly true of the glandular portion of the pituitary body, which, in about fifty cases, has been found either on post mortem examination or from symptoms noted during life, to be greatly enlarged. This enlargement bringing pressure to bear upon the optic tracts and chiasm, or upon the optic nerves, results in more or less loss of the visual

[1] Revue de Medecine, 1886.
[2] De l'Acromegalie, Paris, 1890.

field, which may be confined to the temporal portions owing to the involvement of the nasal half of the retina, and this is the most common limitation; or it may show itself by a concentric or hemiopic limitation of the field. Hearing is not rarely involved. In some cases the sense of smell has been lost, and a peculiar mental hebetude approaching idiocy has been frequently noted. A very fair proportion of the cases present symptoms, on the part of the urine particularly, in the direction of glycosuria and polyuria with attending polydipsia.

Some cases run a comparatively rapid course, terminating in a few years, while others present a very protracted history, the disease not apparently shortening life.

Although numerous theories have been propounded explanatory of this diseased condition, none of them is as yet accepted without qualifications. It was the idea of Marie,[1] though not categorically stated, that the involvement of the pituitary body was the essential feature. Klebs[2] maintained that the persistence of the thymus gland was of the utmost significance. Virchow[3] believes that acromegaly is merely the terminal stage of a condition the early periods of which are not yet recognized. By others it is conceived that the disease is neurotic, depending either upon the presence in the blood of a certain substance necessary for proper trophic action, which is supposed to be the secretion of the pituitary body; or, on the other hand, to the presence in the blood of poisonous products which result in dystrophy, and which normally are eliminated by the pituitary. This theory, of course, is parallel to the one erected by Horsley, expounding the relation of the thyroid body to myxœdema. The interrelation between the thymus, the thyroid, and the pituitary bodies is shown clinically in such conditions as myxœdema and cretinism, and experimentally by some observers who have found in animals, that where the thyroid has been extirpated the prehypophysis cerebri has shown hypertrophic enlargement. It must be added that certain cases have been reported in which the pituitary body has been enlarged to an enormous extent without attending symptoms of acromegaly, and still other cases in which it has been absolutely destroyed by disease, and acromegaly has not been induced. It is difficult, however, to see why the dystrophy originating from a cause such as has been suggested, should be practically confined to the extremities, as such dystrophy must be dependent for its mechanism upon a change in the vaso-motor control through which nutrition is regulated. One or two instances are recorded in which what is denominated hypertrophy of the sympathetic nervous system has been alleged, and there are those who are inclined to attribute to this change in the sympathetic system the peculiar conditions found in this disease.

Inasmuch, however, as the sympathetic system cannot be dissociated from the cerebro-spinal axis, it is scarcely wise to attribute to its involvement the rôle in question.

In some few cases the blood has been investigated without the detection of any peculiarities of a suggestive nature. Our own impressions are that the disease is a near relative of cretinism and myxœdema, to which it shows in certain instances a very close resemblance. With this idea in mind it is our intention, at the first opportunity, in a comparatively early period of the disease, to attempt treatment by the use of thyroid juices administered either hypodermically or otherwise; a method of treating myxœdema which has received the very strongest support from the results obtained, especially by British observers. All other means of treatment for this condition hitherto attempted have apparently been futile.

A. K——, aged forty one, single, cabinet maker.

Family History.—The patient, being of illegitimate parentage, can supply but a meagre account of his ancestry. Of his father he knows nothing. His mother, with whom he lived until he was seven or eight years of age, he remembers as a short, stout, heavy-set woman, with no peculiarities or deformities.

[1] Loc. cit. [2] Loc. cit.
[3] Berliner klin. Wochenschrift, 1889.

Personal History.—Is a native of Silesian Prussia, where cretinism and goitre are not uncommon. His previous health record seems free from any disease of consequence, as he has always, until lately, enjoyed the best of health and spirits. He had a mild attack of malaria some years ago. While still a young lad, and on the occasion of his purchase of a pair of kid gloves, his attention was directed to the size of hands, which were disproportionately large, calling for a man's size glove. He does not remember whether his feet were large at that time, as his shoes were made to measure, as is customary in Germany. Nor did anyone remark any peculiarity about his face and head. He never had occasion to consult a physician for illness, and ten years ago, at the age of thirty, he came to America. Here he found that ready-made shoes were difficult to obtain, on account of the width of his feet. It also became apparent to him that he was an object of attention and ridicule on the street, and remarks were passed about his large head and hideous aspect. It has not been necessary for him to obtain a larger size hat, having worn a 7¾ for a long time. Shortly after arrival in New York he became infected with syphilis, and in due course of time had mucous patches and warts about the genitals and anus. He denies ever having had any skin eruptions, alopecia, sore throat, or iritis. During the last few months a crop of tertiary lesions has developed on the skin. Sexual desire and ability are apparently retained. The appetite is voracious. For the last three years he has been obliged to satisfy a steadily increasing thirst with large quantities of water or beer. Urination has been growing more frequent, and he rises a few times at night to void large amounts of urine. Until about five years ago he had been of a cheerful disposition and mentally active for one of his class, but since that time he is subject to fits of melancholy, at times accompanied by suicidal thoughts. His memory and mental faculties are becoming weakened so that he cannot pursue a connected train of thought, and says he is at times quite "befuddled." He sleeps much and dozes off at any time of day. He has felt for some time that he is losing ground both physically and mentally, and his physical condition and general hideous aspect are such that he can with difficulty find employment. He has slight headaches occasionally, and is subject to nasal catarrh. He applied at the hospital for treatment for the syphilitic trouble.

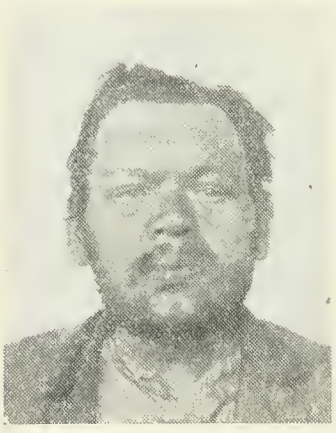

Fig. 1.

Fig. 2.

Present Condition.—The patient is small of stature, height, 5 feet 4¼ inches, weight, 179 pounds. His gait and movements are steady and co-ordinate. Attention being first directed to the head (Figs. 1. and 2), one is struck by the coarse features. The hair is fairly heavy, beard sparse, short, and stubby. The forehead is broad and receding, the superciliary ridges and frontal sinuses are enormously developed, the malar bones are

prominent, the eyelids are somewhat thick and heavy, the pupils are equal in size and react the light. The nose is large and broad, overhung by the massive brows, the alæ nasi are thick, and the nostrils large. The ears are very prominent, but do not project excessively from the sides of the head. The lower jaw is very heavy and massive, especially the rami, the chin projects but slightly, and prognathism is not pronounced. The lips are thick and

Fig 3.

everted, especially the lower. The teeth are somewhat decayed, and in the lower jaw marked interval exists between them, but the lower teeth do not project beyond the upper teeth. The tongue when protruded almost touches the point of the chin, and is broad and thick. The face does not present an elongated oval, but is rather broad laterally. The throat and naso pharynx are apparently negative. The left nostril is somewhat occluded by the swollen turbinated body. The voice is harsh, low, and guttural, the neck is short and thick. The thyroid cartilage is normal in size, but the thyroid gland can be distinguished with difficulty, being apparently diminished in size. There are a few warty growths on the sides of the

Fig. 4.

neck. The thorax is of normal dimensions, there being no increase in the shoulder girdle, nor is there any bony hypertrophy. The heart and lungs are normal, and the post-sternal dulness of Erb is not demonstrable. The abdomen is very prominent, flabby, and pendulous. Examination of the abdominal viscera gives negative results. There is no cervico-dorsal kyphosis nor any lateral deviation. The muscles are under-developed, soft, and flabby. The strength in the arms is much diminished, as tested by the dynamometer, being twenty for the right and thirty-eight for the left hand.

Interest next centres on the hands, which are in striking contrast to the forearms, whose lack of muscular curves is thereby rendered more notable. The wrists are but slightly thickened, but the hands are uniformly and symmetrically enlarged (Figs. 3 and 4). The integument on the palmar surface is very thick, inelastic, calloused, and the normal furrows and markings are deeply exaggerated. The fingers and thumbs are relatively short, stumpy, broad, and flat—"sausage shaped." The nails are broader than long, flat, not beaked or fissured, and appear to be imbedded in a superabundance of tissue. The hand measures 4½ inches in width and 8 inches in length.

The feet (Fig. 5) are enormous, and measure 4¼ inches in width and 10¾ inches in length. The toes, like the fingers, are broad, short, and thick, and preserve their relative proportions, the nails being flat and overhung by tissues. The calcaneum projects markedly, and a large bunion is conspicuous. A prominent feature about the member is a welt or pad of hard superabundant tissue placed on the outer and posterior aspect of the foot, contributing much to its increased size, and at the hallux recalling the heel of the negro. The ankles and

Fig. 5.

legs are not appreciably enlarged. There is no implication of the joints anywhere, and all movements are free and accurate.

Skin.—There is a tertiary syphilitic eruption distributed asymmetrically over the trunk and extremities, especially over the legs and feet, consisting of atrophic pigmented scars, and papulo-squamous and crustous lesions. The post-cervical and cubital glands are somewhat enlarged. There is no œdema at any point.

Genito-urinary System.—The total daily amount of urine is high. No albumin; sugar, 6.07 per cent. No difficulty in urination. The penis is of average dimensions, the scrotum is loose and long, and the testes are rather large.

Special Senses.—There are no sensory disturbances either objective or subjective; no cephalalgia nor neuralgic disturbances. The patellar reflex is sluggish. There is no vertigo, loss of consciousness, or grave emotional disturbances. Hearing and smell are fairly acute; but there is myopia of high degree. There is some diminution of the field of vision on the temporal side for the right eye. The red color field is diminished in both eyes. The retina and nerve seem normal. Taste is normal.

Blood.—Examination of the blood shows the amount of hæmoglobin to be ninety-five per cent. of the normal, and an average of ninety-six countings with the hæmocytometer shows seven million red corpuscles to the cubic mm. The proportion of white to red corpuscles is about 1 to 400.

THE SURGERY OF GALL-STONE OBSTRUCTION.[1]

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It may well be conceded that the management of gall-stone obstruction of the biliary ducts, in the vast majority of cases, is one that interests the practitioner of medicine, and is best left in the hands of the physician rather than the surgeon. It is probable that not one per cent. of patients suffering from gall-stone colic come to a condition that jeopardizes life. The malady is grave often, and tedious. It is complicated by various surgical accidents, ulceration, perforation, septic infection, exhausting fever, profound cholæmia, any and all of which may be ultimately recovered from if we choose to wait. The physician of conservative practice who intelligently watches the wonder-working of nature, stores in his memory scores of cases of gall stone colic where, even after repeated and profound illnesses, the patients have convalesced to perfect and enduring health. We must all acknowledge, however, that when the grave forms of obstruction ensue, our responsibilities in delay increase with each day's demonstration that surgery is prepared to cope with the evil we are watching.

The picture of the parts in trouble that presents itself to the mind of the observer at the onset of an attack is not a uniform one. Diagnosis is by no means simple, less so for the mild cases than for those more pronounced. One sees many forms of gastralgia, dyspepsia, pleurodynia, colic from colon distention, and other recurrent discomforts that closely resemble the gall-stone colic when very small stones are passed. The diagnosis rests with an associated group of symptoms, rather than physical signs, to wit: pain and constricted feeling behind the right hypochondrium, rather than in the abdomen, nausea, tenderness to pressure, absence of fever and of intestinal distention. There is very rarely jaundice, and the illness is over in a few hours.

The picture of such cases comprises the obstruction of the ducts by stones only a little larger than the ducts, and which are easily moved on by peristalsis. When we remember that statistics show that one in ten of those who reach middle life are known to have gall stone, we are the more ready to believe that the larger proportion of cases of brief spasmodic attacks of pain in the anterior hepatic region are due to light gall-stone attacks. Yet we may be deceived by the absence of jaundice and a lull in the acute symptoms into thinking the stone had passed, whereas it has only become permanently lodged in the cystic duct. In this condition a group of cases will be found showing a picture of pretty uniform type. The cystic duct becomes blocked permanently about as often as the common duct. If a stone no larger than a white bean excites inflammation enough in the duct to produce ulceration a cicatricial stenosis ensues which prevents the stone moving either way. Other stones remaining in the gall-bladder beget cholecystitis and a copious inflammatory exudation ensues, with tumor and pain.

The fluid is found, after a while, entirely free from bile, either milky or colorless. It may form a large recognizable tumor, which in time may be absorbed, leaving only an atrophied remnant of gall-bladder encysting the incarcerated stones painlessly. But this is not usually the case. Repeated efforts are made to throw out the foreign bodies and correspondingly persistent pain without jaundice brings the patient to the surgeon. This picture is one of the most common and has yielded many of the most satisfactory results of the recorded operations. I can best illustrate it by a case from my own books.

A young woman of thirty years came under my care with a history of many attacks during ten years, the intervals ranging from two weeks to three months. The severity of the attack had induced morphine habit. Jaundice had sometimes supervened, but not during recent years. She had become emaciated and discouraged. The gall-bladder region was tender on palpation, but no tumor could be felt, even her corset pressure was painful.

On operation, I found the gall-bladder adherent to the stomach by old adhesions. It was not larger than normal, but on section contained a thin, whitish, mucous fluid, and fifty-three small stones. The presence of fluid devoid of color and chemically of bile also in the gall-bladder is always conclusive proof, as in this case, of the obstruction being confined to the cystic duct. My inability to pass a probe through the duct or to feel a stone in it, on palpation was no proof that there was not a small stone there. The patient made a quick recovery with a permanent mucous fistula, from which bile never came. Six months afterward I reopened the abdomen, dissected away the entire gall-bladder, tied a ligature about its duct and found there a small stone incarcerated between two tight strictures, as if it had been lodged there for years.

The patient made an uninterrupted recovery—abandoned the morphine habit, and for four years has maintained robust health, without the least recurrence of pain.

In another case, reported elsewhere, a young married woman came under my care in a condition of grave hectic and debility with a tumor on the right side below the ribs. This had existed six months, with vague colicky pain at first, but never a frank paroxysm. She had never been jaundiced. The mass was tender, hard, and movable. It had been diagnosed a cancer.

I opened the abdomen and found a dense, malignant looking mass as large as one's fist and universally adherent. On cutting into it, I felt that it was even more certainly, from clinical appearance, a cancer. In its centre was a small amount of muco-pus, scarcely two drachms. No stone could be felt within it, nor on examining the ducts from the mesenteric side. She made an easy convalescence. The hectic disappeared. In six months a sinus remained through which I removed from the remnant of the gall-bladder a solitary gall-stone, the size of a pecan-nut, which had worked back from the cystic duct toward the easiest outlet. A few months later the entire hyperplastic tumor which so resembled a hard cancer had disappeared.

Catheterism or probing of the cystic duct when it has not been dilated by the passage of stones into the common duct is a matter of impossibility in the majority of cases, hence the return flow of bile through the gall-bladder fistula left after operation is often the only proof we can have of the perviousness of the cystic duct. I speak only of the class of cases where obstruction is in this duct alone, as illustrated above. These constitute a considerable part of those demanding surgical relief.

It is not to be wondered at when we consider the extraordinarily tortuous and convoluted anatomy of the canal. Few who have not made a minute dissection of it can realize that there are scores of overlapping valves in the two inches of its course. Terrier and Dally in their admirable study of the question of possible catheterization of this canal have been unable to report success in more than one case in four.

I show an illustration of a normal duct which I hardened in alcohol after distending with alcohol, thus maintaining the most normal relations of the parts as found in life (Fig. 1).

It seems incomprehensible that a stone should ever escape from the gall-bladder, and one does not cease marvelling when he has found large and small stones in every stage of progress through this minute duct. The distensibility of the canal far exceeds that of the parturient passages. Rokitansky says that a stone even as large as a hen's egg has been known to traverse the entire canal—and be safely delivered into the bowel.

One might think that the gravest cases of gall-stone disease must fall to the class of cases where obstruction has occurred in the common duct and the flow of bile is entirely dammed back into the liver. This is by no means

[1] Paper read before the Academy of Medicine, March 16, 1893.

so! The acuteness of the inflammatory onset may menace life at the first attack when the stones have not left the gall-bladder. I have little doubt that the life of the patient whose case I will now narrate was saved by prompt operation.

Late in the evening of April 26, 1892, I was called to see a lady of about forty by Dr. J. C. Warren. She had never had trouble until two days before when severe

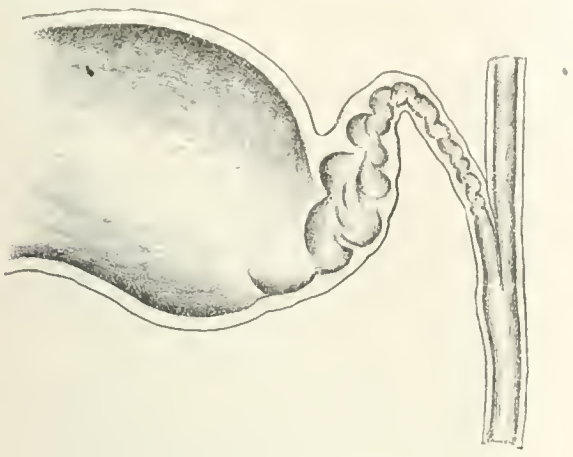

Fig. 1.—Section of Normal Cystic Duct Showing Valves.

colic, vomiting, and purging came on suddenly. For two days the gravity of the symptoms increased and before I saw her had become extremely violent—resisting the quieting action of morphine, freely given by Dr. Warren. When I saw her she was having intense paroxysms of pain, lying with knees drawn up and moving only when forced to vomit. Her condition seemed desperate, her eyes were dark and sunken, pulse poor, and she was evidently approaching collapse. It was impossible to palpate the abdomen, but a full dull area was discerned extending vertically from the liver toward the groin and ending considerably below the navel.

I operated at midnight. The gall-bladder was greatly distended and enlarged downward, resting on the kidney. It was coated with a layer of new lymph, from peritonitis that had already set in, yet her temperature before operation was 100½° F. Slipping my fingers into the abdomen I could feel only one stone at the neck of the sac. Protecting the abdomen by thin flat sponges within it, and drawing out the end of the tumor, I incised it, and evacuated a tumbler full of muco-purulent fluid, not bile, though stained with it, and seventeen gall-stones (Fig. 2), eight of them large and remarkably uniform, nine small and also uniform, all spherical, the larger ones three-quarters of an inch in diameter, the smaller ones one-quarter.

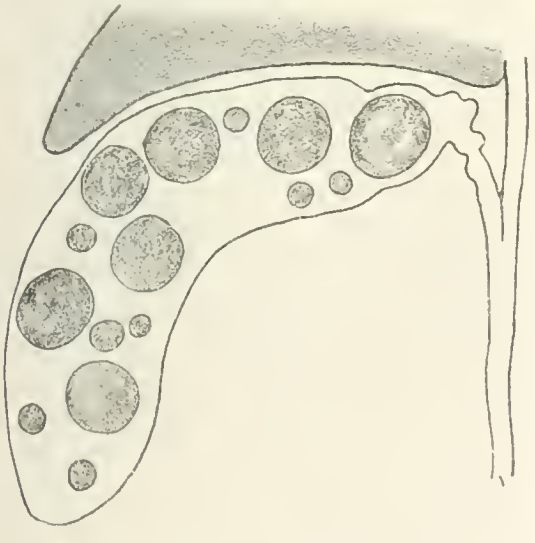

Fig. 2.—Gall-stone Obstruction of Cystic Duct with Acute Distention.

One of the largest ones was tightly wedged in the beginning of the cystic duct.

After evacuating the stones, I closed the cut end of the bladder about a syringe and distended the cyst with Thiersch's solution to see whether it could be emptied into the intestine by pressure and thus prove the patulency of the duct. It was impossible to force water through. I therefore sutured the cut end in the wound and established a fistula. The patient's temperature fell to normal on the following day. Bile flowed freely from the fistula, which closed spontaneously in three weeks. The patient has remained in perfect health since then, now nearly a year.

The question of the endurance of the patient to the physical strain of repeated attacks is one that may legitimately influence the surgeon in advising operation. A striking case in point may be cited here.

A lady, sixty-four years of age, had, during four months, been under Dr. Partridge's care for severe gall-stone attacks, repeated from four to seven days apart, each accompanied by clay stools, porter-like urine, and jaundice. Each time she was encouraged to hope that the last stone had passed. She was unable to leave her bed. The pain became practically continuous, but the jaundice cleared up. The gall-bladder distended and could constantly be felt.

Fig. 3.—Gall-stones Obstructing the Cystic Duct.

It was evident a larger stone had finally blocked the cystic duct. On opening the abdomen, the distended viscus could readily be lifted out of the wound. Three good-sized stones were found as shown in Fig. 3. No suppuration nor peritonitis had been set up. Two of the stones were tightly wedged in the cystic duct, and were with care worked back into the gall-bladder. The cystic duct was then found permeable to a small bougie which passed into the duodenum. I therefore sewed up the wound in the gall-bladder and, after cleansing, dropped it back into the abdomen.

Recovery was uneventful and she has enjoyed unprecedented health for the two years that have passed.

The grave condition of obstruction of the common duct presents another picture, and one in which the new lines of surgical work have more to do. There is no point of the common duct inaccessible (though it seemed to be until very recently) from which impacted stones have not been removed. It may reasonably be said that, without operation, these cases are almost hopeless.

One must recall that anatomically the common duct is buried in the meshes of the lesser omentum and descends behind the duodenum to which and to the pancreas head it is intimately adherent. Close to it are large veins and beside it the portal itself. Unless distended by a stone it is practically impossible to feel it. When it is distended the duct of the gall-bladder is also apt to be. Such cases are illustrated by Figs. 4 to 6.

Intense cholæmia and its train of constant attendant symptoms makes the diagnosis of obstruction unques-

tioned. The diagnosis is not always easy, however, between cancerous and gall-stone obstructions.

The main fact, in the absence of tumor, must be the history of paroxysmal pain antedating the usual year or two that would develop a matured cancer. Chronic jaundice without preceding gall-stone colic is most often due to malignancy.

It has been advised by surgical authorities, until very recently, that profound jaundice is in itself a serious draw-

Fig. 4.—Gall-stone Impacted in Common Duct Two and a half Years. Removed by incision of the duct with removal of gall-bladder.

back to operative work. Accumulated experience now shows that with modern thorough methods the cholæmia is not a drawback to operation.

In the following two cases the most profound jaundice had been constantly present for over two years. In one the blood even had a noticeably slippery feeling from retained bile, yet both made perfect recoveries.

On April 13, 1889, I operated on a lady aged thirty-six, who had gone deeper and deeper in sickness after her first attack of gall-stone colic, two and a half years before. She became almost a black-green, lost thirty pounds, had progressive indigestion and vomiting. She had stools entirely devoid of color and urine like porter. Her paroxysmal pains were "terrible" and petit mal had been recurrent daily for two months. The

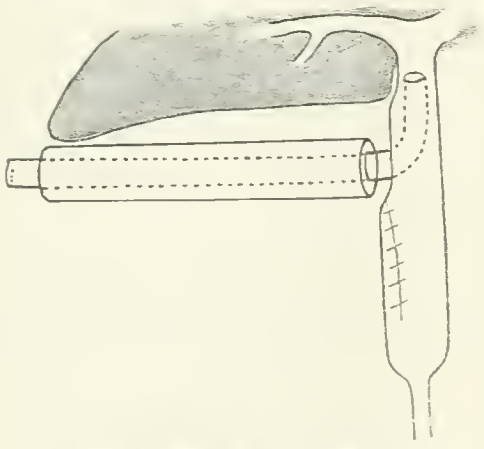

Fig. 5.—Showing Method of Suture and Drainage after Fig. 4.

urine had five per cent. of albumin and some hyaline casts. Palpation failed to discover a gall-bladder. On doing laparotomy I found the gall-bladder buried in adhesions to the stomach, omentum, and colon, but not distended. Several gall stones were removed from the incised viscus, and a large one found more than half way down the common duct, absolutely immovable (Fig. 4).

I cut the common duct open and took out the stone, then removed the damaged gall-bladder and putting a large drain-tube into the hepatic duct sewed up the common duct with fine silk (Fig. 5). Around the drain that emptied the hepatic duct I put a larger one, reaching to the common junction, and packed in a light iodoform tampon against which intestines would rest and in a few hours form a solid well of lymph, precluding extravasation into the peritoneum. The patient lost all her bile through the tube for five days. The inner tube was removed on the second day and the sinus closed in three weeks.

The patient maintains perfect health to date, having in four years had the felicity of bearing a much-hoped for boy.

The second typical case of this group I operated upon three months since. The patient was a married woman, referred to me by Dr. Morrison, who had been treating her more than two years for almost weekly attacks of cutting pains and biliary colic. Hypodermics of morphine had always been needed to allay suffering: jaundice and vomiting had become chronic, and the patient a wretched sufferer. There was no tumor of the gall-bladder to be felt.

I operated January 3, 1893 (see Fig. 6). The gall-bladder was tightly adherent to every neighboring organ. When it had been incised dark, tarry bile flowed freely and I removed one large and twenty small calculi. The dilatation of the ducts was wide enough to allow my in-

Fig. 6.—Large Gall-stone Two and a half Years in the Common Duct.

dex finger to ascend into the liver and down the common duct. In the latter a very large stone was found, an inch and a half below the junction, so tightly held between two strictures that it was necessary to introduce a knife and cut the strictures from within, after which I succeeded in liberating the larger stone. The patient made a speedy recovery.

Thus I have given six cases of the gravest phases of gall-stone obstruction, all of which have made perfect recoveries. All were women.

The literature of the cases of free incision of the distended ductus communis choledochus now includes a considerable number where suture of the divided duct has resulted in immediate healing. The recoveries are so uniform that it can be regarded as scarcely more dangerous than opening and draining the gall-bladder. That it is a more difficult operation to suture a small duct in a deep wound goes without saying, but the operator will find that under the pathological dilatation the walls are thickened, and when the stone is out they are free enough to be easily secured and tightened by stitches. The continuous silk suture is the best.

For the comfort of any who may be forced to leave an

incised common duct unsutured it may be quoted that during the past year Bland Sutton removed three stones from the common duct by incision, and left it open, with a tube running down to it. The peritoneum was shut off by adhesions, easily generated around a small gauze tamponade. The bile discharged freely, the wound granulated and healed up in three weeks.

Keen also bored through the head of the panereas to get at a hard knot of stones in the lower end of the common duct, and leaving it open, drained by a tube. The wound healed kindly without suture.

The lower part of the common duct may occasionally hold the obstructing stone. This is not accessible to the knife applied from the outside of the duct, for the anatomical reason that it is hidden behind the duodenum. There is but one safe and elegant approach, if I may so speak, to it. Such an opportunity was afforded by an obstructing stone in the outlet in a case reported by Dr. McBurney last year, in which he incised the duodenum, released the stone, sutured the duodenal cut, and saved the patient.

This method of searching the duodenal end of the duct I afterward attempted in a case of what proved to be malignant obstruction. As there was no stone in the duct to mark its position, it was impossible for me to identify it. It satisfied me, nevertheless, that the intestinal wound, which healed most perfectly, is an innocent addition to the surgical interference, if it be properly sutured.

Cholelithotrity, or crushing the stone in its duct, either by digital pressure only or by dressing-forceps shielded with rubber tubing, has had a dozen demonstrations of its utility in soft stones, since first used by Tait. Robson and Courvoisier have advocated and practised it, with only one recorded death, and that one not proven as due to the bruised duct. Marriott reported a recovery after crushing a large hard stone through the cystic duct-walls, by rubber-padded forceps, after he had vainly tried to break it up by needles. The fragments of stone have in all cases passed off spontaneously, with a slight colic, in a few hours.

The method should never be lost sight of, as it is more often available than cutting, and it may yet hold a high rank. Its present record justifies its being used where one or two moderate-sized stones are found, especially in inaccessible places. Free incision is now recognized as so safe and successful a method that any substitute for it, except for emergency, does not represent the best surgery.

One new method has entered the field to dispute for preference with the two just mentioned. That is, the formation of an anastomosis between the gall-bladder and the bowel, that the discharge may be directly into the bowel when the duct is obstructed irremediably.

To unite the gall-bladder to the bowel by the suturing method of lateral anastomosis is a quickly accomplished and admirable procedure. The use of vegetable or bone plates of Senn has few advocates for use in the gall-bladder. Chevasse used the plates of bone to unite the gall-bladder and small intestine, but got a combined biliary and fecal fistula, which, nevertheless, soon healed and allowed the bile to flow into the bowel.

The preferred method of suture has been by a double row of Lembert stitches around the free incisions in the opposing viscera. It takes but fifteen minutes to do it well.

Murphy, of Chicago, has lately advocated and used successfully in three cases a simple device, the simplest that has yet been offered for speedily making anastomosis. (See MEDICAL RECORD, December 10, 1892, p. 665.) He uses two metallic buttons, shaped like mushrooms, with hollow stems, fitting one into the other; one button is inserted through a slit made into each of the opposing viscera and sutured there; the stems remaining outside are pressed together and lock between the edges of the buttons the involved bowel and gall-bladder walls. The tight pressure causes sloughing of the included circle in a few days, and sets up adhesive union of the two edges.

Murphy used this device three times in the human subject with perfect success. The buttons were voided in due time and the bile flowed into the bowel. Each of the cases seems to have been one where the stones might have been removed and the natural channels cleared up, without attempting to establish an anastomotic opening where the calculi could escape into the bowel, as they did after the buttons had sloughed out.

Ingenious and successful as this method is, of quickly establishing a new channel for the bile into the intestine, it seems to me a retrograde step in surgical work to sacrifice the perfection of work for the sake of a brief and usually unnecessary saving of time.

Dr. Murphy operated in one case in eleven, and in another in twenty-one minutes, but paid no regard to how obstructing stones in the common duct were going to be helped to escape.

The operation of anastomosis between the gall-bladder and intestine was first done by Von Winiwarter in 1880; again by others in 1887–89, and since, in about twenty recorded cases, and has grown in favor as regards safety and utility.

It is a surgical imitation of one of Nature's methods of getting rid of stones by ulceration into the nearest viscus. It has the endorsement of everyone who has tried it—Courvoisier, Terrier, Robson, and others—and seems to be unattended by risk when properly done. The fear that infectious inflammation from intestinal contamination would follow is groundless. The few autopsies that have followed at not very remote dates after operations have shown that a natural-lipped valve forms at the orifice and protects the gall-bladder from regurgitation from the bowel. The greater danger appears to be that cicatricial stenosis of the opening will close it. It is a natural law that inevitably works against the surgeon in this effort. Autopsies show hundreds of scars of adherent gall-bladder and bowel, but very rarely one that has kept open after the stone has ulcerated its way out. What more can we hope for the artificial opening? The only ground is, as far as I can see, in an incision of an inch and a half, which will give permanence.

Richelot, of Paris, operated by a small opening in a case of obliterated common duct, and some months later, the jaundice having recurred, autopsy showed an obliteration of the opening. On the other hand, one case (Mayo Robson's) has survived nearly three years without stenosis. In his case he joined the gall-bladder and the colon at the hepatic flexure. In two other (Courvoisier's and Chavasse's) most successful cases the colon was used.

It seems to me probable that the colon may be always used with great advantage. The bile has been considered a necessary digestive secretion until of late. It has been shown that patients with chronic fistula pouring out the entire bile-flow often gain weight and health. This would encourage the view that bile is excrementitious, and that we can with advantage let it flow into the alimentary canal low down. The anastomosis is very easily made, and does not involve dragging the small intestine across the colon.

The subject of gall-bladder surgery was a small one when Marion Sims wrote of it first in 1878, only one case having been recorded prior to that, but now it has crept into the field of abdominal surgery with a brilliant record. Robson reports forty operations with two deaths. Tait, Thornton, Courvoisier, Terrier, Czerny, and a score of other names have added their testimony to the safety of the operation and brilliancy of the results.

The records of American surgeons are second to no others. The mortality is not more than five or six per cent. Cases of every shade of interest are being reported, until it seems now that there is almost no complication one may encounter that cannot be met by simple operative principles.

The most grave and irremediable condition is of course cancerous obstruction, and it is here that I believe the field of anastomosis of the gall-bladder and

colon will find its great usefulness. Except in that, and in cases of absolute cicatricial stenosis of the common duct, it may be better supplanted by the judicious use of the knife, or of crushing, by which gall-stone obstruction has been so well demonstrated to be safe, no matter what part of the duct is choked.

THE THERAPEUTICS OF CURRENT DIRECTION AND POLAR ACTION IN NERVOUS DISEASES.[1]

By A. D. ROCKWELL, M.D.,

NEW YORK.

Almost from the birth of electro-therapeutics constant effort has been made to differentiate between the therapeutic action of the two poles of the galvanic current and to come to some definite conclusion as to the effects of current direction. Investigations along this line have, however, been beset with so much difficulty, and the observations as to the effects of this or that pole, or this or that direction of current have been so varied and inharmonious, that no very definite or satisfactory conclusions have been reached.

So conflicting indeed have been the statements offered, that it is now not uncommon to hear the remark that it makes not the slightest difference which pole or which direction of current is used. While every careful observer knows that such a remark is based upon careless observation and insufficient data, yet it has been so frequently and so confidently repeated as to carry with it a certain weight of authority. One great difficulty in the way of correctly differentiating between the effects of the two poles has been the failure to completely eliminate the action of one pole when desiring the effects only of the other; for that there is a difference between the two, even as ordinarily applied, has long been known.

I have seen a hyperæsthetic or painful part to which both electrodes have been applied fail to experience relief until the poles were widely separated, throwing the neutral point outside the diseased area, thus subjecting the painful part to the action solely of the anode or positive pole. In several cases of scirrhus cancer of the breast that have come under my observation, I invariably failed to relieve the pain when both poles were applied on the tumor or in close proximity to each other, but by applying one pole at some indifferent point on the lower extremity and the other to the tumor, the pain has, as a rule, been greatly alleviated. One patient was for months treated almost daily, with the result of keeping her in great measure free from pain and enabling her to dispense altogether with the use of morphine, which had before been a necessity. The notable point in some of these cases was the utter insufficiency of this agent to relieve the pain, although tested many times when the electrodes were applied in close proximity to each other. But no matter how widely we separate the two poles in the treatment of special parts, the fact remains that we cannot by the use of ordinary electrodes completely eliminate an undesirable polar effect. This fact was, I think, pretty clearly demonstrated in a former article, and the electrodes and method of treatment through which we successfully accomplished this result fully described and illustrated.[2]

Since then I have many times repeated and varied the form of these interesting experiments and have somewhat persistently subjected theory and physiological fact to therapeutic tests. In order to demonstrate the different effects of ascending and descending currents, and the way and degree in which they modify the physiologic action of the two poles, I have many times repeated the following interesting and suggestive experiments:

Experiment I.—A frog was chloroformed and an ascending current of ten milliampères was then passed for five minutes through one of the hind limbs, by placing an ordinary electrode connected with the negative pole on the lumbar region, and a depolarizing electrode having a fluid circuit somewhat longer than the limb and a resistance somewhat greater and connected with the positive pole, on the foot. The influence of the positive pole being thus eliminated,[1] the limb was brought wholly under the influence of the negative pole. The current in this case we shall accordingly designate as the ascending negative. The usual closing and opening contractions were observed in the limb, which remained quiescent during the passage of the current. On breaking the circuit, the irritability of the limb to electrical stimulus was tested by the application of two minute metal electrodes to the muscles. It was found that the minimum strength of current capable of producing visible contractions in the muscles of the limb was one milliampère.

Experiment II.—Next, a descending current of the same strength (ten milliampères) was passed through the other limb by placing the depolarizing electrode connected with the positive pole on the loins and an ordinary electrode, connected with the negative pole, on the foot. The limb was thus like the other brought wholly under the influence of the negative pole, the direction of the current, however, being reversed, and can be designated as "descending negative."

At the end of five minutes, the current was broken, when, on testing the irritability of the muscles, it was found that a current of four milliampères was required to excite contractions as against but a single milliampère in the case of the leg first tested. Similar results were obtained with the "ascending positive" and "descending positive" currents, the former diminishing the irritability of the muscles by one third, while the latter diminished the irritability by two thirds, or twice as much. From these experiments we may, I think, fairly conclude, first, that the direction of current *per se* (provided the action of one of the poles be eliminated) has an important influence on the irritability of muscular and nervous tissue; second, that the polar influences are greater than, though distinct from, those of direction. These conclusions are, I am aware, quite contrary to those enunciated by the earlier experimenters in electro physiology. Erb says that "all proof is lacking that the direction of the current is an essential factor in its action;" but it must be remembered that the experiments from which Erb drew his deductions were performed long ago, before we had at command delicate instruments of precision for accurately measuring the strength of the current, and that he did not experiment by eliminating one of the poles as here described.

Physiological experiment clearly demonstrates, through this method of accurate measurement, that it is not alone polar action, but current direction as well, that is important in electrical applications, and clinical observation does but confirm these physiological data. To determine the therapeutic value of the depolarizing method of treatment is a task requiring a keener analysis and more prolonged observation. Where the only electrical treatment employed is through the use of the depolarizing electrode, it is not always easy to determine how much of the benefit comes from this method and how much is due to the action of the current without regard to its direction or polar effects. The result, however, of previous experience in the management of other cases of similar character emboldens me to speak with some degree of confidence as to the superior efficacy of the method under consideration, even in those cases where it was exclusively used. I have, for example, seen and treated many cases of facial spasm, but have seldom seen the slightest benefit result, excepting in a few cases referable to reflex causes and where treatment was begun immediately after the onset of the symptoms. The prognosis in cases of "convulsive tic" of several months' duration, whether dependent upon demonstrable organic disease, or not, is always grave, and I regard the following case as a good illustration of the efficacy of this method of utilizing the galvanic current.

[1] Read before the New York County Medical Society, March 27, 1893.

[2] MEDICAL RECORD, May 14, 1892, p. 537.

[1] See experiments recorded in MEDICAL RECORD of May 14, 1892, p. 537.

Case I.—Mr. R——, aged forty-three, had for more than six months suffered from a clonic painless spasm of nearly all the muscles of the left side of the face. Preceding these more general spasmodic symptoms, there had evidently, according to the patient's account, existed a bilateral blepharospasm, leaving the eyelids unaffected. While the vigor and constancy of the contractions were in a measure regulated by the physical condition, and by emotional causes, he had not been entirely free from them for more than a few hours, since their first appearance. Attaching the depolarizing electrode to the negative pole, I applied it to an indifferent part, directly under the chin, placing a small ordinary electrode of sculptor's clay in front of the ear, thus utilizing what may be termed a descending positive current, the sedative effects of which has been so unmistakably demonstrated in physiological experiments on a frog's leg. With a current strength of seven milliampères, the application was continued for five minutes, during which time the movements entirely ceased, the muscles continuing quiescent for several hours thereafter.

A second similar treatment resulted less favorably than the first, the movements continuing more or less throughout, but at the third *séance* the muscles were again rendered quiescent, and seldom thereafter did the applications fail to more or less favorably influence the convulsive movements. This patient was treated persistently for nearly three months, and while I cannot claim an absolutely curative result, yet the incessant movements were so greatly reduced in violence and the patient enjoyed so many intervals of complete repose as to strengthen my confidence in the value of the method of treatment adopted.

Case II.—Miss G——, aged forty-four, came to me on July 29, 1892, from Dr. William M. McLaury, of this city, and was, I believe, previously examined also by Dr. F. Peterson. She was suffering from an incessant tremor of the muscles of the hand and arm, of presumably traumatic origin.

On the preceding June 4th she fell downstairs, striking on the scapula and head of the humerus, but without breaking any bones. Complete paralysis supervened, but the power of voluntary movement quickly returned, although the fingers by no means recovered their normal mobility. It was evident that no vascular or other lesion had occurred. The effect has been compared not inaptly to the demagnetization of iron by a blow, a profound influence being exerted on the molecular nutrition of the nerve elements, and the possibility of recovery being determined by the degree of nutritional damage.

About July 14th she observed a slight tremor of the arm, which grew rapidly worse, until it presented every appearance of a case of palsy agitans. I was enabled in this case to distinctly differentiate between the effects of the ordinary and the depolarizing methods of application. The first attempts by the method of central galvanization and with the ordinary forms of electrodes, were followed by neither temporary nor permanent alleviation of the tremor, but when the depolarizing electrode was used, with a current "positive" and descending, there was a marked and immediate modification of the activity of the tremor, and through the several weeks that the patient was under my observation this decided decrease in the activity of the symptoms continued. In a letter recently received from this patient, she says: "My arm and hand grow stronger all the time, and the nervous tremor is almost entirely gone."

As the cause of the tremor in this case was traumatic, it is entirely possible that even with no treatment her condition might advance naturally toward recovery; but for our present purpose the interesting feature of the case is the immediate results following the use of the depolarizing, after the failure of the ordinary, electrodes.

Case III.—Mr. F——, aged fifty, was referred to me by Dr. T. C. Fanning, of Tarrytown, N. Y. In November, 1891, he was caught by a slowly moving engine, dragged along the ties, and sustained fractures of the clavicle, humerus, and several ribs. Traumatic paralysis of the radial, median, and ulnar nerve followed, with complete motor, and partial sensory, paralysis of the right forearm and hand, and in a less degree of the arm and shoulder. He was for three months treated electrically by his attending physician (not Dr. Fanning), who used the faradic current only, having him hold the electrodes in his hands. On one occasion he went into another room and forgot all about the patient, allowing a strong current to pass for nearly an hour. The paralysis failed to improve under such treatment, and when he fell under my observation, in May last, there was such a profound atrophy and loss of muscular irritability, associated with degenerative reactions, that I gave a discouraging prognosis.

Under the treatment adopted, however, he at once began to improve, and improved rapidly, and is now able to handle baggage, in his capacity of baggage-master, almost as well as ever. This case presents points of interest in connection with the depolarizing method of treatment aside from that of its final recovery.

Two tests were made that were as conclusive in establishing both the fact of a difference in the effects of current direction and of the two poles, as any of the purely physiological experiments. The depolarizing electrode was connected with the negative pole and placed upon the spine about the seventh cervical vertebra, while an ordinary electrode, connected with the positive pole, was applied to the back of the hand. For five minutes an ascending positive current of ten milliampères was allowed to pass. Immediately thereafter, on testing the muscular irritability, it was found that slight contractions of the paralyzed muscles could be elicited by interrupted currents fourteen milliampères in strength.

On the following day the arm was again tested by connecting the depolarizing electrode with the positive pole, applying it to the back of the hand. The ordinary electrode was connected with the negative pole and applied to the upper part of the spine. The current was now ascending negative, used with the same current strength and same length of time as before. When, however, at the close of the *séance* the muscular irritability was tested by the ordinary method, there was a marked increase in the muscular contractility.

Eight milliampères were amply sufficient to induce contractions quite as marked as those observed in the use of fourteen milliampères in the former test, while the latter number caused contractions that were quite vigorous.

Perhaps no well-informed person would at the present stage of its progress deny to electricity a place as a therapeutic agent of value, but it is so associated with capriciousness of action and uncertainty of effect that they have lost all enthusiasm in its investigation. If one possesses no insight into the important subject of current differentiation, to say nothing of current direction and polar effects, it is a very easy and a very common thing not only to fail in affording relief in conditions that are easily relievable, but even to aggravate an existing trouble. Electricity has been known to favor the renewal of cerebral hemorrhage and the production of its characteristic symptoms.

Time and time again I have been made cognizant of the irreparable damage that has been occasioned by its injudicious, and I might say brutal, use in spinal cord lesions, especially as they occur in the child. Cases of lead paralysis may, I believe, be rendered incurable by too vigorous electrical treatment, hyperæsthesia can be readily augmented, neurasthenic conditions aggravated, and the pains of rheumatism, neuralgia, and migraine rendered intolerable. And yet all of these conditions are in greater or less degree amenable to intelligent electrical treatment, and were not this essay limited to a special phase of this form of treatment, I might give many examples of the truth of this statement.

Neurasthenia, especially, is a condition for which electricity has been either a bane or a boon according to the

kind of electricity employed and the method of its application. It is a state of mind and body which occasions more unalloyed misery than almost any other form of nervous disease, and yet with time and care a person suffering from this strange impoverishment of the nerve force will almost invariably recover. There is, however, no stereotyped method of treatment that will answer in these cases, whether medicinal, hygienic, or electrical. Each case is a law unto itself and must be studied by itself.

It has seemed to me that in a certain class of hypersensitive patients, where the vitality is low and the powers of reaction feeble, the exclusive use of the anode, applied to brain and spinal cord, or to the region of the cilio-spinal centre, gives rise to depressing effects somewhat similar, perhaps, to those resulting from the use of baths of low temperature. Neuralgic symptoms have supervened, the circulation became impaired, and coldness of the extremities occasioned. So too where sedation is indicated rather than stimulation, the injudicious and prolonged use of the cathode, with an ascending direction, has seemed to do harm rather than good. The electro-physiological law, that a direct current as used in the experiments that I have detailed here and elsewhere has an exhausting effect on a nerve, while an inverse current increases the nerve force and its power to respond to stimuli, is a very simple demonstrable proposition, and it would be strange indeed if it bore no relation to electro-therapeutics.

Hitherto, as before suggested, the investigation of this subject has been beset with difficulties, owing to the fact that in every instance the polarity of the current entered as an interfering factor. While different results were plainly obtainable from different directions of current in a given portion of nerve, it was always a question how far these differences were owing to a difference in the direction of the current, and how far to a difference in polar effect.

With the depolarizing electrode, even the physiological investigations of this subject becomes much easier, and there is abundant ground for believing that its employment adds not a little to our therapeutic resources.

PHYSIOLOGICAL PSYCHOLOGY.

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The grouping of the phenomena of the senses, commonly called mind, must be unintelligent, unless we can make use of some fundamental general principle that at least will be in harmony with, even if it does not explain, all the facts of these complex phenomena.

In the theory of evolution we have a philosophical history of the inorganic and organic existence of the world, in which we find that all gradations of structure are related to one another, that "the universe, living and not living, is a mechanism, explicable on physical principles." That whatever goes into the organism as physical force, must come out again as physical force, and every phase of every transformation that it may undergo must be vigorously accounted for in terms of physical force.

That the force of the motion and matter of the universe that is imperishable and continuous is the raw material, "the clay of the potter," out of which all are evolved by their action and reaction, which necessitates transformation or change from the simple to the complex; for "every active force produces more than one change, every cause produces more than one effect."

If all existence is the result of this universal transformation or change of matter and motion from the simple to the complex, we are forced to the conclusion that the highest activity is the result of the compounding and differentiating of matter and motion. It must also obviously follow that the only distinction between a portion of what is called "inert matter," that upon investigation is found to be so complex that it staggers the imagination, and a worm, or even man, is only a difference of degree of differentiation. That we know no more of the ultimate nature of one than of the other. That the man looking into the heavens and seeing millions of great luminous masses full of energy and vitality, "moved by unknown forces like clouds before the summer breeze," that sees "star-mist condensing into clusters, star clusters forming into suns, singly or in systems, rejoicing as giants to run their course, extending in all directions the mighty arm of their attraction, getting from ever new regions of space supplies of motive energy, to be again transformed into the various forms of force, and again to be distributed in lavish abundance to the worlds which circle around them," knows no more of the ultimate nature of things than the veriest clod that ever breathed the breath of life. It is admitted that of the ultimate nature of the force of matter and motion we can know nothing, and hence we can know nothing of the ultimate nature of anything, because everything is built up out of these unknowable units. The best we can do is to reduce the complex into the simple, to systematize the effects and motions, and give a proximate interpretation.

The changes within the organism are continuous and similar to the changes without; it is all matter in motion, evolved by the process of evolution out of the forces of the external world from which it cannot be detached; it is simply a phase of force, and can by no possible process transcend it, for our experiences can be nothing else than the adjustment of the inner with the outer forces, and hence it must again follow, that the aggregate of brain activities called mind is a phase of force, a relation of the external forces with the forces in the matter of the brain that can never pass the conditions of its existence, and that a thing's "existence and our knowledge of it is one and the same thing," all actions and reactions of the motions of the matter of the universe. The difference is one simply of the amount and variety of motions assimilated, and the process of assimilation or reaction of motions is determined by the organs the organism is endowed with. "The highest reasoning is one with the lowest forms of thought, with instinct and reflex action."

As the astronomer has shown us the "energy and vitality" of the heavens, so the physicist tells us that every special kind of atom can be made to oscillate by a special order of ethereal waves; that some absorb luminous vibrations because they have a rate of vibration susceptible to these ethereal waves of a certain length and rapidity; that heat is a molecular motion, like light, of a different rate of vibration, that affects the motion of the atoms; that a piece of iron is the seat of activities immense in quantity, pulsating with almost infinite rapidity. Change it into steel and its rhythm becomes changed and more complex. Place it near an adjacent magnet and it again becomes changed in some inexplicable manner, and is the seat of activities so remote as the sun. In chemistry the confines of our knowledge are the elements; but that they are exceedingly complicated is admitted by the most keen-eyed chemists and physicists; that they are related to one another and have evolved from some simpler antecedent matter along fixed lines, so that they are classified along an ascending scale in which we too have "missing links," as spectral analysis has shown, and the discoveries years later demonstrated. So the progress of the higher types of molecules is effected by modification upon modification of the simple molecules, and that the more heterogeneous molecules, with their complex motions, are more susceptible to the disturbing power of external forces working more continued changes; assuming dynamical conditions by being affected by the media in immediate contact, and displaying energy, and having the reactions of the forces organized forming the nucleus for the persistence of the motions in organization, which persistence is along the lines of least resistance: that is, along the lines of previous motions.

The nuclei of these lowly organized and irregular motions may become equal, for the external and internal

portions not being acted upon alike, it throws off a portion of its organization, and the segment, with the impressions of previous motions, begins an individual development along the lines of least resistance; that is, along the lines of previous motions. As the environments of these simple organizations change, the forces change. If they become more complex, numerous, and nutritive, there will be a greater rapidity and complexity of organization, a greater differentiation; which process we may imagine to be carried on without limit, and produce any amount of heterogeneity of changes that are always working in the direction of equilibrium. In the reproduction or repetition of every organism, be it ever so complex, a segment is given off by the parent organism that must obey the motions of which it is a part, undergoing only such slight changes that the changed conditions of environment produce. In the lowest forms of organisms, like the amœba, there is simple division or segmentation: as we ascend the scale of organisms, with their complex and differentiated organs, there goes with it a corresponding differentiation of segmentation. The segment given off by the parent organization is endowed with the motions of which it is a part, and that under favorable environment—that is, proper nutrition—begins its journey of growth, and unravels the accumulated motions of the parent organization, and builds along the lines of least resistance: that is, along the lines of previous motions or experiences, and in an almost infinitesimal space of time passes through every phase of the remote evolution. This is a phase of the manifestation of force we call heredity, of the ultimate nature of which we know nothing.

An organism must hence be looked upon as a "molecular whirlpool," an elemental strife, an adjustment of forces that is forever swinging between nutrition and denutrition, synthesis and analysis, and its adjustment in time and space extends to the capacity of the organism's reactions of the forces of its environment. In the lowest types of life adjustment is limited to immediate contact, because they have no differentiated motions that beat in harmony with the more delicate vibrations. Each of the differentiated sensations bears the stamp of the differentiated cells in which they originated or are perceived. Each sense "factory" turns out a product of its own specific kind that results from the assimilation of such external forces as they are in tune with. The brain is composed of compound molecules, that have compound rhythms of motion, that are adjusted to the different senses.

The energy set in motion by the senses in the plastic protoplasm of the cells in the brain may be largely consumed in conveying the motion to other cells, in which it meets with some resistance, causing the expenditure of some heat and waste product, for there is more or less structural modification along which nutrition builds and organizes the changes, forming transit lines of motions or experiences. It will thus be seen that each sensory impression leaves behind a record in the structure of the brain, through which the same feeling or experience may be reproduced in a fainter form by sensations similar in kind, or automatically. As J. S. Mill says: "Stored up knowledge is not a mental state, but a capability of being put into a mental state."

A simple reflex action is a completely organized experience in the nervous structure; in it there is scarcely any resistance, and hence an almost imperceptible amount of feeling. It is a simple reaction of an external with an internal force. As sensory impulses increase in number, in space, and time, as they do in the ascending animal scale, they become more complex and less instantaneous. The resistance persists for a time in the larger reflex ganglia, and forces the motion along the previous lines of motions, experiences, or feelings, bringing into the field revived feelings or motions of likenesses and differences simultaneously, that must be carried off along the lines of least resistance. This is an adjustment or discrimination of all the feelings, and may be along a motor nerve and cause volition, or expend its motion in the molecules of the brain in the formation of new transit lines that are adjusted with the other revived motions or transit lines of experiences and become organized, and can later be reproduced with a view of translating them along motor nerves and cause volitional motor impulses: and these may be of varying degrees of complexity, as a simple reflex action, instinct, memory, reason, and will, all names for states of feeling of the ultimate nature of which again we can know nothing because they are phases of force.

The motion in a sensory nerve not having an adequate channel of escape will be transmitted along centripetal fibres and revive other motions or organized experiences, the adjustment of all of which causes resistance tension, and that state of feeling of which we have all gradations, from the simple unconscious to conscious feelings. Sensory impulses follow the lines of least resistance, or, in other words, along the line of cells that by training and heredity have an analogous motion. It is always an adjustment of differentiated motions, a relation of the present with the revived previous feelings or experiences they more or less resemble, and the equation of these feelings determines along what set of centrifugal or motor fibres the surplus shall be carried. In proportion as an organism is organized, in that proportion does it have feelings, varying from the simple feelings of the amœba and worm, with their simple reflex action, to volition and ideation of the more complex forms. That the most profound reasoning, the best regulated imagination, are but mechanical processes—a comparison of present with past experiences—the equilibration of the motions in the matter of the brain.

That consciousness is not the cause of the changes that take place in the brain, but the result. That consciousness is only a name for the feelings of the changes that are either pleasurable or painful. That volition cannot enter into the chain of causation, for it is simply an accompanying state of conscious feeling. "If each wave of molecular motion brought by a nerve-fibre to a nerve-centre has for its correlative a shock or pulse of feeling, then we can comprehend how distinguishable differences of feeling may arise from differences in the rates of recurrence of waves, and we can frame a general idea of the way in which, by the arrival through other fibres of waves recurring at other rates, compound waves of molecular motion may be formed, and give rise to units of compound feelings; which process of compounding of waves and production of correspondingly compounded feelings we may imagine to be carried on without limit, and produce any amount of heterogeneity of feelings."[1] All movements are initiated by feeling, that may result from an immediate feeling, or a reflex of memory or previous experience, or traced back into the vast abyss of heredity. The relation between subject and object is the reaction of internal and external forces, and along or in the circuit of the reaction, aside from waste of nutritive matter, and heat in the adjustment and organization, and drafted-off motion for purposes of volition, there is feeling, a purely subjective state; and may be pleasurable and further life, or painful and tend to destroy. Feeling is a name for a state of molecular motion in the brain, of the ultimate nature of which we can know nothing, and if, as Mr. Spencer says, in his "Data of Ethics," "Mind consists of feelings and relations among feelings," then mind is a phase of force.

It must be evident that psychical phenomena stand within and not "outside" the closed circuit of motion. Psychical phenomena are modes of motion that accompany the physical action. Psychical action is the physiological action of the brain, a phase of the manifestation of force, of the ultimate nature of which we can know nothing, and no amount of metaphysical and hair-splitting dissertation can transcend it. Feeling is a subjective manifestation of the force of the matter and motion of the brain. The change in the sensorium is the cause of the feeling, and "the ultimate elements of mind would

[1] Spencer, Psychology, vol. i., p. 154.

seem to be feelings and the relations between feelings."[1] All our knowledge is a knowledge of states of compound feelings, resulting from the reaction of the external forces with the forces in the matter of the brain. The reaction causes tension, resistance, and persistence in its adjustment of present and past feelings causing conscious feeling. Conscious feeling being the reaction of the external with the internal forces, the universe must be the picture of that reaction stated in terms of consciousness, and the reality and existence of which is of the highest degree of certainty. If the conscious feeling is the reaction of forces that are names for certain states of conscious feeling, then we can only know the reaction in terms of consciousness of the ultimate elements of which we cannot have the slightest conception. If of the ultimate elements we can know nothing except as their reaction in states of feeling, then states of feeling are but a phase of the unknown reality. All we can know of feeling is its relation with other natural phenomena. What the reality is is the Idealism of Descartes, Kant, and Huxley,[2] which refuses to make any assertions, either positive or negative, as to what lies beyond consciousness.

Experiences or motions that once were conscious feelings may have become unconsciously automatic. As adjustment becomes more organized it becomes more rapid, because the permeable transit lines of motions give little or no resistance and is hence more automatic and less conscious. Many of the feelings in later life become so thoroughly organized that they cause little or no resistance, for they are so completely adjusted to the environment that there is no longer resistance or comparison with other motions or feelings, and conscious feeling results from the adjustment of different feelings and their relations that have not been completely organized. This is why we have the greatest consciousness in feelings of infrequent occurrence, and greater consciousness of the simple and frequent feelings in the developing and unfolding stage of our existence. "Great exertion in a child fails to evolve from its motor organs the dynamic effect which a small exertion evolves from those of a man," because of insufficient adjustment and organization. A nerve-centre that is surcharged with nutritive material discharges its surplus energy automatically along its lines of least resistance; that is, along the lines of nutritive changes or previous experiences, and thus discharging other centres of stored energy with augumentation of feelings. The discharge of the energy involves waste and exhaustion, necessitating rest for repair by cessation of activities; or the stimulus ceasing there is cessation, although the motion may continue to discharge other motions, and these feelings other feelings, and this is why conscious feelings are always in a transitional state. There can be no uniform state of consciousness. A single compound experience in a continuous state would not be a conscious feeling. An internal automatic or an external stimulus must be ever active: there must be a ceaseless interaction of the motions, with resistance and adjustment, to create tension or feeling. That the rhythm of the motions of the different cells of the brain are not alike, we are well warranted in believing, by the different wave-lengths of sonorous and luminous vibrations that the specialized cells are specifically capable of taking up, and that this difference of their rhythm in their adjustment causes resistance and change of motion, and that complex state of feeling that brings them into the field of consciousness. The changes are analogous in kind, only the rate of motion is changed by the motion of the protoplasm of the cells; just as the molecular motion of the fire is transmitted to the steam confined in the boiler creating tension, and transmitted by the engine along belts to a dynamo—an adjustment of metals of different rates of motions—and there changed into the force called electricity, that may be transmitted along conductors or metals of similar motion in any direction to almost illimitable distances. If we place anywhere in its circuit metals of motions or rhythms of different wave-lengths, as platinum or carbon, there is at once great resistance, and the equation or adjustment gives rise to the again changed forces, light and heat, from which again we could produce the same round of transformations in a more limited degree; that is, less the amount of force of which we have lost control.

The molecules of nervous matter are extremely complex, carrying with them the complex rhythms of motion of which they are composed. They are in a very unstable equilibrium, and easily affected by the multitudinous molecular pulses of the environment in which they exist, and of which they are a part. The brain is a molecular mechanism, a register, like a phonograph, of the forces, and the equation of the forces is its adjustment. It cannot reproduce experiences and their relations unless it has received them. The very condition of existence is a reflex of the environment, and it is pleasurable to the extent with which the organism is in equilibrium with the forces of which it is a part. The actions of every being are the equivalent of their capacity to react on the forces of the outer world. These complex reactions are expressed by pain and pleasure. Pain is excessive and inharmonious resistance with concomitant distinction. Pleasure is harmonious with least resistance; it is equilibrium. When the harmonious flow of an idea is arrested by, for instance, the failure to bring into the current of motion the recollection of a name or a quotation, there is a strain, an oppression. The current is dammed, the arrested motion is sent along the different transit lines until it finds the correct one, or is given up, when the flow of the idea is again resumed, with relief of strain. Thinking is simply a revision or correlation of experiences, the prime factor of which is the equilibration of subject and object, and "like other forms of purposive activity, thinking is primarily undertaken as a means to an end, and especially the end of economy."[1]

We know that the dog is susceptible to odors of which man has not the least conception, and it is because the dog has an olfactory apparatus the rhythm of motion of which is tuned to be affected by an almost infinitesimal portion of attenuated matter. This fact shows that the possibilities and varieties of man's development are almost illimitable. If some cultured physician had the olfactory sensibilities of a keen-scented dog, he probably would detect most of the disease germs, and classify them by his power of smell, and the amount of benefit to humanity would be incalculable. This holds equally true of all the senses, for there are an almost inexhaustible number of motions of wave-lengths so delicate, and of attenuated matter so divisible, that our senses are too dull to appreciate, because we have no matter in motion so highly differentiated, so delicately tuned to assimilate them, and this, too, is why there is such a variation in mankind. This is why the character and disposition of a person is sometimes changed by a disease like typhoid fever, by the effects of the poison on the cells of the brain, by altered nutrition and circulation. Disease of heart, lungs, and intestines, injuries to the head and severe shock, are frequent causes of such alterations. The nerves regulating the supply of blood to the higher molecular centres of the brain may become disordered and paralyzed, and cause an infinite variety of abnormal conditions. This is how the physiological effect of remedies produces changed physiological states.

It is upon this hypothesis that we can explain the great variety of abnormal mental phenomena. The seemingly occult and wonderful feats of "mind"-reading are performed by highly irritable and nervous persons having these sensibilities well marked and trained. The horse is a "mind"-reader, he appreciates the confusion of the driver through the lines. The conduct of our daily life is the result of "suggestion." In persons of nervous disposition and hysterical or irregular and unstable action of the brain, with feeble heart and anæmia, there is, as a rule, during sleep, an unusual and well-marked amount

[1] Professor J. Fisk: Cosmic Philosophy, vol. ii, p. 118.
[2] Huxley: Lay Sermons, p. 329.

[1] J. Ward: Encyclopædia Britannica, vol. xx., p. 77.

of dreaming, that are unconscious realities, and arise, as a rule, within the brain of the sleeper, because it is irregularly and incompletely nourished, and hence excessively irritable, and discharges automatically and unconsciously waves of molecular motion along the lines of least resistance, that is, along the organized transit lines of previous experiences. When the stimulus or "suggestion" comes from the outer world, and the conscious subject becomes unconscious to everything but the suggested reality, and his whole mental and moral existence related to it, we have hypnotism. The suggestion determines a mental activity that is oblivious to everything but the hypnotizer. The activity of the senses as a whole are submerged, probably due to the effect on the heart, and an irregular distribution of blood in the brain. The suggestion may also cause disturbance of other regulating functions. The hypnotic state is closely related to sleep; there is a sub or abnormal consciousness, but it is in relation with the hypnotizer; he alone is conscious to him, he only can "suggest" to his senses, and this being the only reality, can guide him. The adjustment relates only to the hypnotizer, his whole mental activity is concentrated on him, he is unconscious to the environment as a whole, and if not stimulated by the suggestor is in sleep. Here we see again that consciousness is a name for a state of activities in the brain, and also that there are varying degrees of consciousness. If a man is instantly killed, or even if he dies of a lingering disease, he loses his consciousness. If he loses his consciousness then how has he come to it if it is a something "outside" the circuit of physical action? "We have not the faintest shadow of evidence wherewith to make it seem probable that Mind can exist except in connection with a material body. Viewed from this stand-point of terrestrial experience, there is no more reason for supposing that consciousness survives the dissolution of the brain, than for supposing that the pungent flavor of table-salt survives its decomposition into metallic sodium and gaseous chlorine."[1] "Granted (says Professor Tyndall) that a definite thought and a definite molecular action in the brain occur simultaneously: we do not possess the intellectual organ, nor apparently any rudiment of the organ, which would enable us to pass by a process of reasoning from the one to the other. They appear together, but we do not know why." If feeling or thought is a name for a state of molecular motion in the brain, then "thought and molecular action" is the same thing, and is why they "appear together." If of the ultimate nature of molecular action we can know nothing, then we have not even the "rudiment" of the "intellectual organ." If of the ultimate forces we can only know the reaction of an infinitesimal portion in terms of feeling, then what is the reality? "The Unseen World" of Professor Fisk, "is inconceivable, because it is entirely without foundation in experience."[2]

If the morality of the future has a physical basis it will be more keenly appreciated, more fully comprehended, and its rewards will be proportionately greater. It will give us definite ideas of the causes of crime, sin, and misery, and this wider knowledge will make a broader humanity, for justice will recognize the more remote conditions. Society then will not pursue the criminal with the doggedness of a tyrant and the spirit of vengeance, but will find its duty along the lines of prevention and reformation. The child brought up in an environment of thieves, is a thief not by heredity but by organized habit. It follows the lines of least resistance in its organized brain activities. The total depravity of child or adult results from the total depravity of their environment. We will then fully appreciate that loss of self-control initiated by the first surrender to sin and pain can never be wholly undone, that it must work its effects as surely as a "stone dropped into water must give forth its arrested motion in rippling circles." That each surrender but more indelibly organizes the habit, and is registered in the brain. The habit that gives for the moment pleasure, remotely causes pain. The unsatisfied habit produces pain, while the pleasure diminishes, and the pain prompts to action rather than the prospective pleasure. Brain activity follows the lines of least resistance, the desire to abstain is as great or greater than the habit, but the adjustment of the body to the habit is in pain without it. Says Burns:

"I waive the quantum o' the sin,
The hazard of concealing;
But, och! it hardens a' within,
And petrifies the feeling!"

No doubt if the conclusion we have arrived at is a correct one, many will be alarmed, for it will wash out a number of their cherished beliefs; certainly all the witches, ghosts, and devils will be driven from the field of possible existence. Spirit-rapping, table-knocking, and their allied nonsense, will be evidence against the "evidence of their senses." Millions of human lives have been sacrificed upon these altars of educated and cultivated ignorance. The dreary record of its path, the daily sacrifices still going on, remind us there is still a prodigious work to do. The garden of human society is still full of these weeds. We still like to chase shadows and allow the realities to slip by. In this work of weeding out and tearing down we thin the garden of what is fungous knowledge, and the plants of worth, of real knowledge, will have a more vigorous growth. If we thin the field of the knowable we enlarge the scope of the unknown. The consciousness of a power that transcends knowledge will be more firmly engrafted on the mind. The insoluble problem of this omnipresent power will be broad enough to take in the central idea of all creeds—of past, present, and future.

[1] Professor J. Fisk: Unseen World, p. 45. [2] Ibid. p. 47.

Progress of Medical Science.

Oil Enemata in Chronic Constipation. — Dr. Fleiner distinguishes two varieties of chronic constipation, viz., the atonic and the spasmodic. These two forms of chronic constipation are sometimes found combined. The lower half of the large intestine is then in a state of spasmodic contraction, while the upper half is atonic and distended with gases and fæces. The distinction between atonic and spasmodic constipation is of the highest importance as regards treatment. Electricity, massage, and laxatives, which are so efficacious against the former, not only fail in the latter, but are actually harmful, for the spasm of the intestinal wall is increased by the irritation produced. Better results are obtained in some cases from the administration of narcotics, particularly belladonna and hyoscyamus, and of warm injections of infusion of chamomile, peppermint, anise, etc., but these means also very often prove inefficient. Olive oil injections, however, constitute a ready and safe way of relieving even the most obstinate cases of spasmodic constipation. The oil exerts a stimulating and soothing action on the intestine. It can also be used in cases of atonic constipation, but as this is relieved by other means of a still simpler kind, the injections are especially indicated in cases of mixed and spasmodic constipation. For purposes of administration, Professor Fleiner employs a cannula with a bulbous end, similar in appearance to an ordinary vaginal tube, and large enough to allow of the easy discharge of the oil. The cannula is connected by means of a flexible tube with a syringe containing about fifteen ounces of pure oil. The patient is made to lie on his back with the pelvis elevated, the cannula is introduced, and the oil injected slowly. The operation usually takes from fifteen to twenty minutes. The cannula need not be passed very high up the rectum, for, by placing the patient in the position above described, intestinal pressure is lowered and the oil is, as it were, aspirated by the intestine. For some time after the injection the oil gives rise to no sensation whatever, but after a while the patient feels a desire to pass wind. There is no pain if pure oil is used.

At the end of a few hours, in the morning if the enema was administered at night, a more or less abundant evacuation is produced which contains only half the quantity of oil injected. The remainder is retained and gradually passed in the course of ten days or a fortnight. The injection is repeated daily until the intestine is cleared of its contents. Two or three enemas are usually sufficient for that purpose. When this has been done, the effect is kept up by means of an injection of about ten ounces of oil at intervals of a few days. When the intestine is very much distended with fæces, the first injection may not succeed in moving the bowel. In such cases an enema of water is given a few hours after the oil injection. Nothing but pure oil of good quality should be used, that is to say, oil free from all rancid and acid principles which are apt to give rise to colic. Needless to say that the apparatus should be kept scrupulously clean. After each operation the tube and cannula are cleaned by washing first with alcohol and then in water. Apart from chronic constipation, which is so frequently met with in neurotic subjects, in anæmia, and various gynecological affections, oil enemata are also very useful, according to Professor Fleiner, in the treatment of membranous colitis, in typhlitis, rectal inflammation, and intestinal disturbances connected with diseases of the stomach.—*Medical Week.*

The Transverse Incision in Supra-pubic Cystotomy.—At a recent meeting of the Clinical Society of London (*The British Medical Journal*) Mr. R. W. Parker read a paper advocating a transverse incision in preference to the more usual vertical incision in cases of supra-pubic cystotomy. The plan was first advised and largely practised by Professor Trendelenburg, of Bonn. Mr. Parker related five cases of supra-pubic incision for various bladder affections, two cases being operated on by a vertical incision and three by the transverse method. Case I. was a boy, aged fourteen, who had fallen on to a crowbar, which had entered the bladder through the rectum; after a temporary recovery there was recurrence of cystitis, then a stone formed which, when extracted, proved to have as its nucleus a piece of trousers cloth. The boy then made an excellent recovery. Case II. was a boy who had to be operated on three times for recurrent stone within about two years. Supra-pubic cystotomy was practised twice, and median lithotomy on the third occasion. He had since remained well. Case III. was a man with recurrent stone in the bladder and a very persistent cystitis. After supra-pubic cystotomy by the transverse method he recovered, baths and irrigation having been carefully carried out subsequent to the operation. Case IV. was a lad, aged nine, who received some severe injuries from a tramcar—compound fracture of the right femur, separation of the symphysis pubis, rupture of the bladder, dislocation of the penis, great bruising of the scrotum and perineum. A transverse supra-pubic cystotomy afforded a complete and an easy outlet for the urine until the urethra was again available. The boy recovered with slight shortening of the femur. Case V. was a boy, aged twelve, who proved to have a mulberry calculus in his bladder. A transverse supra-pubic cystotomy was practised. The stone was easily removed. As the edges of the incision into the bladder fitted very accurately without any sutures, it was decided to close the external wound; a soft catheter was passed at short intervals. Primary union took place. The advantages claimed for this method were that a freer access to the bladder was obtained, that the bladder was opened at its least movable point, close behind the pubes, that the chances of primary union (in suitable cases) were increased, that when drainage was necessary it could be obtained more easily by this than through a vertical incision, as the recti muscles tended to close in the latter case, while in the former they tended rather to open. In the ensuing discussion Mr. Buckston Browne thought that the transverse incision was well suited for children and healthy bladders. But for other cases, especially those of elderly men with cystitis, in whom the abdomen was apt to be large and fat, and to be associated with one or two inguinal herniæ, the transverse incision was not suitable. Occasionally, in the removal of large stones, it was necessary to divide one or both recti muscles. In one such case a hernial protrusion ensued—an accident that he had never found occur in cases of vertical incision only. As to suturing the bladder, it was only advisable when that organ was perfectly healthy, which was not often the case. Mr. Pearce Gould had been surprised that Mr. Parker had not referred to cases admirably adapted for the transverse incision, namely, cases of tumor of the bladder. Cases of stone, he thought, were excellently treated by the vertical incision. In cases of tumor of the bladder, however, the transverse operation had been found to be very advantageous by French and German surgeons. One surgeon stitched the wall of the bladder temporarily to the external wound of the skin until the growth was removed, when the sutures were at once taken away. There must be a very real danger of hernia—at any rate, in old men—after the transverse incision. He thought the opening into the bladder should be made as directly backward as was possible, not obliquely down toward the "neck" of that viscus. Mr. Parker, in reply, said that he would recommend the transverse operation in all cases of cystotomy, unless there were a special contra-indication. As to doing the operation on fat men, he had done it in such a case fourteen days before for malignant disease of the bladder. The transverse incision gave ready access to the disease. If the wound were made inordinately long the surgeon might wound the hernial regions, but such long incisions were scarcely ever necessary. If the stone to be removed were a large one it should be broken up and removed piecemeal.

Malignant Tumors in Children.—According to Dr. Stern, no single organ in the child's body is exempt from neoplasm. Skin, bones, lymphatic glands, eye, and brain may be attacked, and the lungs and pleura do not escape. The kidneys and genital organs are the favorite sites, but the liver and alimentary canal may also be affected. The author first refers to carcinomatous growths in the skin. He then observed a case of spindle-shaped sarcoma of the tongue in a child, aged four, which recurred fifteen months after removal. Among the growths connected with the genital organs, primary sarcoma of the vagina has been observed in a child, aged three years. Both sarcoma and carcinoma of the uterus have been seen in very young children. An ovarian tumor which had undergone carcinomatous degeneration occurred in a child, aged fifteen. Carcinoma of the testis was seen in a boy, aged one and one-half year, and sarcoma of the same organ in a boy, aged five. Sarcoma of the bladder and prostate have also been met with in children. Malignant disease of the kidney is much more frequent. Quite a number of cases of malignant tumors of the abdomen, starting from the retroperitoneal glands, have been observed. Dr. Stern records the case of a boy, aged eleven, in whom a large carcinoma was found between the layers of the mesentery. In connection with the alimentary canal the number of cases is small. Sarcoma and carcinoma of the liver had been observed. Carcinoma of the pancreas has been seen in children of two and thirteen years respectively. A lympho-sarcoma of the lower end of the œsophagus has been recorded in a child, aged four years. Carcinoma of the stomach has been observed at least three times. Under malignant disease of the small intestine, Stern records the case of an infant, a few days old, in whom a sarcoma of the ileum gave rise to complete intestinal obstruction. Under the large intestine, the author reports the following case in a girl, aged eleven years: For a month preceding her admission to the hospital the bowels had acted irregularly, and for twelve days the obstruction had been almost complete. It was thought to be a case of chronic intussusception until examination under an anæsthetic revealed a stricture

high up in the rectum. Right colotomy was performed. After death, six months later, an adeno-carcinomatous growth encircling the bowel was found not far from the anal orifice.—*Deutsche Medizinische Wochenschrift.*

The Pain of Visceral Disease.—Head maintains that pain caused by visceral disease is referred to definite cutaneous areas which are distinct for each organ affected, and in which tenderness often coexists (*The British Medical Journal*). Each of these areas corresponds to the distribution of the pathic fibres contained in one or more of the posterior spinal roots. By mapping out the tender area it is possible to ascertain from which portion of the cord the affected viscus receives its sensory fibres. The tenderness from visceral disease extends as a band round the body, and, therefore, is present over points where pressure cannot affect the diseased organ. Pain from affections of the pleura or peritoneum is local, not referred, and the tenderness is absent from bony points, such as the iliac crests, and vertebral spines, where pressure does not affect the serous membrane. Reflexes obtained from the hyperalgesic zones are exaggerated. Certain states, such as anæmia or pyrexia, modify the normal limitation of the pain and tenderness arising from visceral affection, other root areas becoming involved. In hysteria the sensory disorders either correspond to the distribution of nerve-roots or follow "natural" lines, for example, extend completely round a limb. In the former type the sensation of pain is most affected; if anæsthesia be present the distribution thereof differs from that of the analgesia; reflexes cannot be obtained from the analgesic area. In the second type reflexes are not abolished; thermal, pathic, and tactile sensations are affected within the same areal limits.

Inhibitory Phenomena of Shock.—Roger presented the following note to the Paris Academy of Sciences in October last. Shock is a morbid state due to some intense excitation of the nervous system, and is characterized by an *ensemble* of inhibitory acts, of which the arrest of exchanges between the blood and the tissues is the most constant and essential. Following the tearing out of the sciatic nerve, the application of chloroform to the skin, immersion in iced or boiling water, irritation of the peritoneum, galvanization of the pneumogastric or of the medulla, traumatism of the encephalon, etc., Roger had observed shock that bore certain definite and constant resemblances in spite of diversity of origin. In all these cases venous blood became red, respiration was slowed, and bodily temperature fell from one to twenty degrees, and sometimes more. Chloroform to the skin reduced temperature twenty degrees in four hours. Owing to the arrest of physiological exchanges, no toxic substance could enter the tissues from the blood. Alcohol and opium were without effect. Strychnine injected into the veins proved equally innocuous, in spite of the fact that all the medullary centres were in a state of hyper-activity. During shock the muscular excitability was three or four times greater than normal. The phenomena of shock must be considered, then, as due to an excitation and not to an exhaustion. If the medulla is penetrated by some sharp instrument there is a respiratory syncope accompanying the arrest of exchanges, a respiratory syncope not due to the destruction of the nerve-centre, for the excitation of the floor of the fourth ventricle by means of the faradic current will produce a slowing or momentary arrest of respiration. This is an inhibitory act; or, in other words, an active phenomenon.

Ischio-Pubiotomy, or the Operation of Farabeuf.—This new obstetric operation is described by Pinard, who employed it in the case of a woman, thirty-two years of age, who presented herself to him with an oblique pelvis associated with an ankylosis of the left sacro-iliac articulation. Her first pregnancy had been terminated by means of basiotripsy; the second by premature labor at the eighth month; the third was an instrumental labor resulting in the death of the fœtus, and almost that of the mother; the fourth was terminated by premature delivery of a dead child; and finally she came, in November, 1892, again pregnant, and expressing the wish to be delivered of a living child. At first it was decided to perform symphyseotomy, but the existence of the sacro-iliac ankylosis led to the belief that the gain following the operation would probably be insufficient, and it would be impossible by it to sensibly increase the dimensions of the antero-posterior diameter, which was reduced to 8½ ctm. Cæsarean section appearing to offer but slight chances for the mother's recovery, the operation of ischio-pubiotomy was decided upon. According to Farabeuf, the originator of the method, this operation will permit of the passage of a head much larger than the normal, nearly a sixth larger.

The technique was as follows: Labor having lasted fourteen hours the ischio-pubic ramus was divided, and then the horizontal branch of the pubis on the ankylosed side 5 ctm. from the median line. The Tarnier forceps were then applied at the superior strait, and with scarcely any traction a living infant was delivered. During the traction upon the forceps there was a spontaneous separation of the two severed segments of 2.6 ctm., and, at a given moment, of 4 ctm.

The sole difficulty of the operation consists in passing the chain-saw with which to cut the horizontal branch of the pubis. With a suitable needle this difficulty disappears. Hemorrhage is almost nothing. After delivery the bony fragments come in contact and sutures for this purpose are unnecessary; the soft parts must be sutured. The after-treatment is very simple.—*Medical and Surgical Reporter.*

Motor Disturbances in Neurasthenia. — Pitres, of Bordeaux, recently read a paper on this subject before a learned society at Marseilles. Tremor is the most marked motor disturbance of neurasthenia, especially in the upper extremities, hardly noticeable when the arms are hanging down, tremor is at once apparent when they are raised in the attitude of taking an oath. This tremor is like the so-called alcoholic tremor; or, better still, like that described by Marie as characteristic of exophthalmic goître, and is most pronounced in acute neurasthenia. Emotion, fatigue, and all kinds of excesses exaggerate it. Tremor is present in more than half of all neurasthenic cases. The other motor disturbances are simply accidental episodes, and are in nowise characteristic of neurasthenia, as muscular twitching simulating paramyoclonus multiplex, cramps, rhythmic spasm of the neck, tongue, or œsophagus, and intermittent lameness. Astasia-abasia, often considered a symptom of hysteria alone, Pitres finds of comparative frequence in neurasthenia. Romberg's sign is not unusual, and aids in the erroneous diagnosis of pseudo-tabes. Absence of knee-jerk may also mislead. Loss of pupillary reaction to accommodation and the presence of the reflex to light—the reverse of the Argyll-Robertson pupil—is one of the most singular neurasthenic anomalies. Symptoms of grave organic disease are also symptoms of neurasthenia, and careful examination and judgment are necessary to avoid errors in diagnosis, prognosis, and treatment. Neurasthenia lasts longer than hysteria, and the symptoms disappear more slowly. Neurasthenics are but slightly, if at all, susceptible to hypnotic influence. Hence the futility of hypnotism in this special disorder.

Tumenol, derived from mineral pitch, is a viscid, dark-yellow liquid, soluble in ether, benzol, but not in water, has been shown to possess marked reducing properties. Neisser thinks its value in skin therapeutics to depend largely upon sulphonic acid. It is recommended in eczema, dermatitis, burns, ulcerations, etc., and in some cases exercised a decided influence upon itching. It may be used diluted with oil, in the form of compresses wet with a two to five per cent. solution, as an ointment, or as a tincture made with ether, alcohol, glycerine, and water.

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THE MODERN VIEW OF INFLAMMATION.

THE subject of inflammation, while practically of the greatest importance, is not one of which the pathology excites much interest. The student learns that the process is characterized by pain, heat, redness, and swelling, that there is a dilatation of blood-vessels, stasis, emigration, exudation, pus, and so on. As to its cause and essential character, he has read in his books various theories, which did not give him much satisfaction and left little impress on his mind.

There has been going on, however, among pathologists a decided revolution in their views of the nature of the inflammatory processes, and it is quite time for the thoughtful physician to wake up to the fact of this change. In a recent series of masterly lectures on the subject, Metchnikoff has presented the results of a long and laborious study of inflammation as it occurs in all forms of animal life. (Vegetables, he says, do not have inflammation.) Metchnikoff goes much further in presenting his theory than most pathologists, but in many of his fundamental ideas there is nothing at variance with accepted facts. Underlying all forms of inflammation is the general law that the process represents a reaction of the organism to irritants. The irritants capable of causing inflammation were formerly thought to be almost any foreign substances; later it has been believed that only microbes and microbic products can cause inflammation, and for the surgeon this is still practically true. It has been shown, however, that certain chemical and mechanical agents can cause inflammatory changes. Much stress has always been laid upon the blood-vessels and connective tissue as being the tissues primarily and essentially involved.

It is from this view that Metchnikoff most positively dissents. For him, inflammation is a matter of cells. These cells all come from the mesoderm and are lymphoid in character. Without a mesoderm there would be no inflammation. The irritant particles in the body have the power of drawing these lymphoid cells to them, and this power is called chemotaxis. Having reached the irritant body, be it a microbe or toxine, the cell proceeds to devour it and render it harmless. The cell is therefore called a phagocyte, and inflammation is "phagocytic reaction of the organism to an irritant." Metchnikoff finds four kinds of leucocytes in the body. Only two of them, the mononuclear and polynuclear, have much phagocytic power. They originate in the lymphatic glands, the spleen, bone, marrow, and blood. The polynuclear leucocytes have chiefly the latter origin. The different leucocytes are differently affected by different irritants, and in accordance with the chemotaxis and the kind of phagocyte we have different kinds of inflammation. Tubercle is one type; syphiloma another; suppurative and exudative inflammations furnish still other examples. The part played by nervous and vascular tissues in inflammation is necessarily secondary to the phagocytic process.

One fact that follows from the new view of inflammation is that this process cannot be idiopathic; it cannot arise without some poison or infection. Again, an inflammation has a tendency to subside. It cannot be kept up unless the infection or poison is a continuous one. Chronic nephritis and chronic hepatitis are, therefore, misnomers, unless it can be shown that a chronic irritant exists. Already, therefore, pathologists show a tendency to place some of the chronic inflammations in the category of degenerations.

Altogether, it can be seen that the modern views of inflammation will, if proven true, make great changes in our conception of the nature and treatment of disease.

TRACHEOLOGY—A NEW SPECIALTY.

THE honor of differentiating another surgical specialty apparently belongs to Dr. Carl Beck, who contributes a series of articles to the *New York Medical Journal*, on surgical diseases of the neck. The author says: "It appears not more than natural that there are specialists for orthopedic, for abdominal, as well as for genito-urinary surgery. Since the last few years specialties even for surgical diseases of the face and mouth, for cancer, for hernia, and, last but not least, for diseases of the rectum, have been created.

"I see no reason why the neck should not be entitled to rank with the latter organ, for instance, as far as importance and scientific interest are concerned. The one fact is indisputable, that among all regions of the body it shows, in spite of its small extent, the greatest number and variety of all kinds of tumors." Besides sarcoma, carcinoma, syphilis, gummata or glands, and tuberculosis, Dr. Beck mentions the hyperplastic, the leucæmic, and the malignant lymphoma, lymphangioma, lymphosarcoma, fibro-sarcoma, fibroma, enchondroma, osteoma, steatoma, neuroma, lipoma, struma, myxoma, atheroma, aneurism, simple angioma, and the monolocular and multilocular cyst—that is, cystic tumor of the visceral arches—air cyst, serous cyst (hydrocele colli), deep-seated dermatoid cyst, blood cyst (hæmatocele colli), synovial cyst (hygroma of the thyroid region), echinococcus colli; furthermore, tumors produced by leucæmia or pseudo-leucæmia.

Among the various kinds of abscesses are the idiopathic ones, the phlegmonous, the pre-visceral, retro-visceral, retro-pharyngeal, and retro-œsophageal abscesses.

Besides this there are the injuries, and the nervous, muscular, and bone diseases. Surely here is enough to set up a specialty, which will perhaps in time expand into an association of American Tracheologists, with its annual meetings, its transactions, and its journal.

The name, we should add, is not the suggestion of Dr. Beck, but seems to be the proper and fitting one. We

know of only one objection, and that would come perhaps from the gynecologists. These gentlemen already do a good deal of work on the neck of the womb, and might claim to be, in a sense, followers of the collic art already. But we feel sure that some suitable compromise could be made by which the new adornment to our nosology would be harmoniously received; and the patients of the future thus be enabled to receive the most advanced surgical skill when they get it where the chicken got the axe.

THE PRACTICE OF MIDWIFERY IN NEW YORK.

MANY of our readers, even those living in New York, will no doubt be surprised to learn from the timely report of Dr. Rosenberg, appearing in this issue of the MEDICAL RECORD, that the practice of midwifery in this State is free to any person, male or female, who will take the trouble to have his or her name registered, and pay a fee of fifty cents. A physician cannot prescribe for a baby with colic, and a pharmacist cannot put up the prescription, unless the one has given satisfactory proof of his fitness to treat disease, and the other to compound medicines. But the perilous passage of the infant from its mother's womb to the outside world, perilous alike to the mother and to the child, may be entrusted to the guidance of any old crone or ignorant beldame who thinks she can make a better living in this manner than by scrubbing floors or selling apples on the street corner. When we read that nearly one-half of the registered births in this city are reported by midwives, we need no longer be surprised that over three thousand four hundred children were still-born in the year 1891. The wonder is, rather, that there were not twenty thousand still-births, and we can but admire the midwives for their forbearance in abstaining from meddlesome interference with the beneficent processes of nature. Dr. Rosenberg's comparison of the statistics of New York and Berlin in this respect is instructive, as giving some idea of the number of victims annually offered up on the altars of ignorance by these false priestesses of Lucina.

It is strange that such an anomalous condition should exist in this State, and it is far from creditable to us that we should be so far behind many other States of the Union in this most important matter of the protection of the lives of parturient women and of their offspring. We earnestly hope that Dr. Rosenberg's paper will receive the attention it deserves, and that it may result in the passage of a bill regulating the practice of midwifery in New York. It is a disgrace to the Commonwealth that no such law is yet on its statute-books.

SYMPHYSEOTOMY AND THE NEW YORK ACADEMY OF MEDICINE.

THE latest Bulletin of the New York Academy of Medicine announced that the subject for discussion at the regular meeting, on May 4th, would be "The Application of Symphysiotomy at this Era." As this is the official Bulletin of the Academy, whatever appears in it is presumed to be authoritative, and to bear the stamp of approval of the entire body. We must, therefore, enter an energetic protest against the orthography in this number, for we should grieve to see such an egregious blunder repeated with the apparent sanction of an association of learned physicians, generally regarded as the leading society of its kind in this country.

We had occasion a few weeks ago to draw attention to the erroneous, though unfortunately common, spelling of the word symphyseotomy, and now we are compelled to return once more to the same subject. Symphyseotomy should be spelled with an *e* and not with an *i*. The word is derived from two Greek words, *σύμφυσις*, a union or growing together, here specifically the symphysis pubis, and *τομή*, a division or cutting. As it means division *of* the symphysis, the latter word is used in the genitive case, the form for which is *συμφύσεως*. There is no iota in this form of the word, and there is no *i* in the English word derived from it.

Owing to the interest which the revival of this operation has excited, the word is coming into common use, and now—at the very start—is the time to insist upon the correct spelling of it. The error has even crept into some of the latest medical dictionaries, for example, Billing's and Gould's; but we are glad to see that Keating has avoided it, and although the final volume of Foster's dictionary has not yet appeared, we are certain that such a scholarly work will not sanction this absurd spelling.

We would suggest to the editor of the Bulletin of the Academy, in all kindness, that he take a little more care to avoid lending the approval of the society to such wretched blunders as this. The "Century Dictionary" is on the shelves of the Academy, and so are other authoritative works of reference. It is possible, however, that this was a printer's error, and escaped notice in hurried proof-reading. If so, we withdraw our words of chiding and extend sympathy instead, for we too have suffered in the same way and with the same word.

TREATMENT BY WHOLESALE.

A CORRESPONDENT of the *Therapeutic Gazette* gives a description of the way three or four hundred patients are treated daily at the Out-patient Department of St. Bartholomew's Hospital, London. The whole business is done in two hours, and 142,745 cases were attended to during 1,200 hours of the year of our Lord 1892!

The staff consists of three physicians, six assistants, and nine surgeons, or eighteen in all. Supposing each one were assigned to a different patient, the average time per patient would be about five minutes. As a matter of fact, some of the eighteen only assist, and the actual time given to the individual case cannot be over two or three minutes. The question arises, how is it done?

The casualty patients are all seen in the "surgery"—a great hall ninety feet long by thirty wide. Rooms open from both sides of this, those on one side being occupied by the medical staff, and those on the other side by the surgeons and by students, who constitute their dressers or assistants. The entrance is by two doors, and on the opposite side, facing these, is the dispensary counter. The floor of the hall is divided up by screens, one end being devoted to the women and the other to the male patients, who wait, either on forms or standing in file, near the rooms in which they will be eventually seen.

At 9 A.M., precisely, the doors are opened for the admission of patients, not widely, but held just open enough to admit one patient to squeeze in at a time. This re-

quires all the care of the porter on guard. Every patient, before being let in, has to answer a crucial question as to what is the matter with him. Having done this satisfactorily, and it requires almost a special education to get this out of the London pauper patient, the porter, rightly or wrongly, drafts him to one or other of the physicians or surgeons, having first given him a zinc ticket. By 9.30 there will be three hundred or four hundred patients waiting, and at ten the doors are closed. By eleven o'clock the room is emptied.

In order to secure this extraordinary result every possible device is used to lessen the labor. The physician scrutinizes the patient, asks him a few questions, and then writes the initial of a mixture. The prescription is taken to the druggist's counter and there a bottle is filled from Stone Jug A, B, or C, as the case may be. If anything more elaborate is required and a prescription has to be written, the patient has to go to an apothecary's shop near by.

In epidemics of any particular ailment, the examination is often carried out wholesale, and one may sometimes see a row of people complaining of sore throat, waiting to be examined *seriatim* with the aid of the spatula, or a number of cases of bronchitis stripped ready for the cursory examination which alone is possible.

This ends the ceremony, so far as treatment goes. The most popular mixture is that known as "queen iron," a simple mixture containing ferric chloride and quassia, the taste of which leads the patients to think they are taking quinine, hence their name for it. This seems to do a wonderful deal of good in the cases of atonic dyspepsia, struma, general wretchedness, etc., which are engendered by working for long hours in the crowded, hot rooms which so many of them have to frequent. Two or three bottles of this generally suffice to make cases of this sort feel all right again. Perhaps next in favor comes the "haust. menth. sulph. c. mag. sulph."

℞. Mag. sulph. ..... gr. lx.
Acid. sulph., dil ..... ℥x.
Syr. papav. rub. ..... ℥xxx.
Aq. menth. virid. ..... ad. ℥j.

This is, besides being one of the most efficacious, one of the cheapest mixtures in the Pharmacopœia. Next comes the "haust. gentiana c. rheo."

℞. Inf. rhei ..... ℥ss.
Tinct. gent. co ..... ʒss.
Sod. bicarb ..... gr. xviij.
Sp. chloroformi ..... ℥x.
Aq. menth. pip. ..... ad. ℥j.

The efficacy of this mixture in a large proportion of the cases of dyspepsia is without question. The remainder of the stock of the small dispensary is made up of cod-liver oil, pills, ointments, etc.

"REFLEX" FADS.

The list of "reflex" causes of disease has become pretty nearly coextensive with the special structures of the human body. Marshall Hall began by crediting a large class of cases of epilepsy to irritations of the stomach, intestines, and uterus. Since his time the genital organs have been much in evidence as excitors of remote disease. Sometimes the clitoris or the uterus, and sometimes the ovaries or the tubes, have been to blame. In man the prepuce and the deep urethra have been most vigorously attacked. Curiously enough, the testicle has been treated with sedulous respect. Of late we hear much of piles and rectal pockets as disease breeders, while others think that eye-strain is much more serious than rectal discomfort. The turbinated bones and the mesenteric ligaments have had their share of professional attention. With all these variations in pathogenesis, it is hard to find where the truth lies.

We are told that medical fashions, like others, move around in a circle. And it would look as though this were the case with the "reflex" fads. We rub our eyes and wonder if we are back in the days of Baker Brown, on reading the following clipping from the *Boston Medical and Surgical Journal*:

"Under the title 'Is Evolution Trying to Do Away with the Clitoris?' Dr. Morris presents a paper which is both novel and suggestive. He starts with the statement that eighty per cent. of all Aryan American women have adhesions which bind together the glans of the clitoris and its prepuce in part or wholly, and which cause little or much disturbance. The results of such adhesions are an imperfect development of the glans, a lessened sexual desire, and various nervous disturbances. These disturbances depend primarily upon irritation of the terminal branches of the pudic nerve in the attempt of the erectile glans to adjust itself to less elastic surroundings, and, secondarily, upon the irritation caused by retained smegma. Such irritation leads to masturbation and various perverted sexual desires, and later to the second series of disturbances, the reflex neuroses, which are the most important because they are the most baneful.

"Dr. Morris gives the very few vague allusions to this source of trouble which he was able to find in the literature, and then says that there are thousands upon thousands of women in this country who are suffering from reflex neuroses which are directly and solely dependent upon preputial adhesions. He adds: 'We can now learn that the girl who becomes irritable, disagreeable, and hysterical may become charming, interesting, and possessed of all feminine graces when her prepuce is forcibly peeled away from the glans of the clitoris.'"

There is something almost horrible in thus putting the charms of lovely woman in such close relation with a non-adherent clitoris.

SOMNAMBULISM AND FRENCH HYSTERIA.

Hysteria in France is evidently an unknown quantity, capable of embracing within one elastic classification every form of functional nervous weakness. One of its latest acquisitions is somnambulism. In the *Gazette Hebdomadaire de Médecine et de Chirurgie*, August 6, 1892, mention is made of Mesnet's recent observations, undertaken to prove that hysteria is the parent of somnambulism; and that ecstasy, catalepsy, and lethargy are its brethren, as all these conditions are but the varied expression of an identical morbid entity. Very different is the teaching of American physicians, who affirm that the phenomena of somnambulism depend rather upon an originally irritable organization than upon a specially diseased condition of the nervous system. Their presence in children and the young reveals nervous weakness and an imperfect process of nutrition.

Measures to relieve indigestion and malnutrition are of first importance. Cod-liver oil or its substitutes should be administered, the cold bath promptly tried, out-door sports secured, together with rest, exercise, and diversified mental tasks suited to the strength and needs of the patient. In persons advanced in years, of previously sound mind and body, somnambulism becomes of more sinister aspect. Appearing late in life, it heralds the approach of organic brain disease. But this is not hysteria, either in the French or English sense, though it reveals an ill-balanced state of the nervous system. Hysteria ought to have its just dues, everything belonging to it. But hysteria and cerebral or spinal exhaustion are not synonymous. To each its own. Somnambulism is a symptom, and as such is frequently present in families where nervous disease abounds. The hysterical may walk in their sleep; so, too, young persons of the neurasthenic type; and the aged may also show this sign of imminent organic brain disorder. To say that sleep-walking and restriction of the field of vision, central amblyopia, and loss of color perception, together with other well-known definite hysterical phenomena, make up the syndrome of hysteria, is to affirm what is difficult to prove.

News of the Week.

March's High Death-rate.—The bulletin of the State Board of Health for the month of March shows that there were 12,000 deaths reported in March, or 387 daily, which is fifty-three more than in February, and thirty more than the daily average for March, 1892. There appears to have been not less than 2,000 deaths more than the normal for the month. The number of deaths from acute respiratory diseases has risen from 1,900 in February to almost 3,000, which has been exceeded only in months in which grip epidemics were at their height. There were 561 more deaths from this cause than in March, 1892, when an epidemic, then waning, caused 1,500 deaths. Half of the surplus mortality for the month above the normal is due to lung diseases. The increase is due to epidemic influenza, the mortality from which was probably about 1,800.

Death from Nitrous Oxide Gas.—A sudden death in a dentist's chair is reported from Buffalo, due to the inhalation of nitrous oxide gas.

Passed Examinations for Army Surgeon.—The Medical Examining Board of the Army, which has been in session in the Army building on Whitehall Street for three weeks, closed its spring examinations last week. Successful candidates were: Drs. Edward L. Munson, of New Haven, Charles Lynch, of Syracuse, James M. Kennedy, of Baltimore, J. S. Kulp, of Pennsylvania, and Alexander N. Stark, of Norfolk, Va.

American Gynecological Society.—The eighteenth annual meeting of this Society will be held in the College of Physicians, corner 13th and Locust Streets, Philadelphia, on May 16, 17, and 18, 1893.

The Association of American Medical Colleges.—The fourth annual session of this Association will be held at the Pfister Hotel, Milwaukee, Wis., on Wednesday, June 7, at 3 P.M. Amendments to the By-laws will be suggested, granting associate membership of one delegate from each recognized school of Post-graduate Instruction in the United States, and from each State Board of Medical Examiners in the United States. It is also proposed to divide membership in the Association into three classes, of active, associate, and honorary.

The Colorado State Medical Society.—The twenty-third annual meeting of this Society is to be held in Denver, June 20, 21, and 22, 1893. Members desiring to present communications, or in search of any information relating to the meeting, are requested to write to Dr. Wm. P. Munn, Chairman of the Executive Committee, 709, 14th Street, Denver.

Sir Andrew Clark has resigned his position as visiting physician to St. Bartholomew's Hospital, and has retired from active practice.

St. Luke's Hospital has been offered $2,400,000 for its site. It wants $2,500,000.

Dr. Benjamin Franklin Sherman.—A complimentary dinner was given on April 25th, by the Ogdensburg Medical Association, to Dr. Benjamin Franklin Sherman, in celebration of his fifty-second anniversary in the practice of medicine, and of the completion of his twenty-fifth year as president of the Association.

American Electro-Therapeutic Association.—The next annual meeting of the Association will be held in Chicago, September 12, 13, and 14, 1893.

The New Jersey Academy of Medicine.—The annual meeting of this Society was held on Wednesday, April 19, 1893, at Taylor's Hotel, Jersey City. The following officers were elected: *President*, Dr. John D. McGill, Jersey City; *Vice-president*, Dr. Robert F. Burridge, Newark; *2d Vice-president*, Dr. R. F. Chabert, Hoboken; *3d Vice-president*, Dr. A. K. Baldwin, Newark; *Recording Secretary*, Dr. John J. Broderick, Jersey City; *Corresponding Secretary*, Dr. W. P. Watson, Jersey City; *Treasurer*, Dr. Lott Southard, Newark. The next meeting will be held at Newark, on Wednesday, May 17, 1893.

The Illinois State Medical Society.—The forty-third annual meeting of this Society will be held in Chicago, in the Methodist Church Block, corner of Washington and Clark Streets, on May 16, 17, and 18, 1893. The Executive Committee has decided, subject to change, to have four full half-day sessions, and one evening session, leaving Wednesday afternoon free, and hoping to adjourn finally about noon Thursday. A detailed programme will be issued and mailed to members before the meeting.

The Gross Memorial Fund has already reached the amount of $8,000, leaving only $2,000 to be collected.

The D. Hayes Agnew Memorial is to be in the nature of a hospital ward with an endowment fund, and the sum of $150,000 is to be raised. This is the largest amount which it has ever been attempted to raise in memory of a physician. If the promoters of the fund succeed it will show that medical men are held in greater estimation than ever before. It took some effort to raise a quarter of a million for General Grant, and the Washington Monument was finished by Congress, but in the case of the Agnew memorial the object itself is one that appeals strongly to the charitable.

Medical Society of the State of Pennsylvania.—The forty-third annual meeting will be held in Williamsport, on Tuesday, Wednesday, Thursday, and Friday, May 16, 17, 18, and 19, 1893, commencing on Tuesday, May 16th, at 9 A.M.

Physicians and Others in Los Angeles have organized a Psychological Society, and have already succeeded in materializing a human hand. A similar society was organized in this city some years ago, but its members could not even materialize a quorum.

A Bill now before the Pennsylvania Legislature forbids the exhibition of monstrosities at public places like the Museum.

Sanitation and the Communion Table.—The agitation concerning the advisability of doing away with the communion-cup in church services, and substituting therefor individual cups for each member, is bearing fruit. Our friend, Dr. A. J. Longfellow, of Fostoria, O., at the last quarterly conference of the M. E. Church, introduced the following resolution: "Resolved, That the church purchase four hundred little wine-glasses and each communicant receive the wine out of a glass that no other person has used, and the bread be passed on baskets or plates, and that it be not handled or broken by the preacher.—*Cincinnati Lancet Clinic.*"

The Death of Dr. Charles D. Scudder.—At the last annual meeting of the Medical Board of the New York Lying-in Asylum, the following resolutions were adopted:

Resolved, That, in the death of Dr. Charles D. Scudder, the Board has lost one of its most earnest, enthusiastic, and valued members. Singularly qualified for the great task to which his rare gifts were consecrated—the amelioration of the sufferings of his fellow-beings—he devoted himself to it with an unselfishness of purpose which won for him the deepest admiration of his associates. He was a profound student, an accomplished physician, a sincere friend. His loss is irreparable.

Resolved, That a copy of this resolution be sent to the family of Dr. Scudder, to the medical journals of this city, and to the Board of Managers of the Lying-in Asylum; and that it be inscribed on the records of the Medical Board.—L. L. SEAMAN, M.D., *Chairman.*

Congress of German Hygienists.—A Congress of German Hygienists met at Dresden on March 24th. At the first sitting Dr. Sturm, of Berlin, spoke on the nature of personal predisposition and its relation to place and time. He declared the comma bacillus to be a mere plaything, and the part it plays in the etiology of cholera as but small. It produced an effect only in cases of personal predisposition. At the second sitting it was resolved to lay the draft of a system of public hygiene before the Imperial Government. The Congress also empowered one of its members to prepare a manual of hygiene, to be published at the instance of the Hygienists' League, with a list of the names of its members. There was also a long discussion of the Imperial Epidemic Bill, which was severely criticised. The proposals of the Congress for its modification, including a protest against all measures of disinfection except in the case of dirty linen, are to be forwarded to the German Government. The Congress also expressed the opinion that, if properly treated, cholera is not more dangerous than typhus fever or pneumonia. The Congress relied for the protection of the population against infectious diseases and epidemics upon the introduction of a new system of personal and public hygiene, including the propagation of the knowledge of the laws of health, with a view to the annihilation of the most important cause of disease in individual predisposition. To this end the Congress appointed a committee to draw up a memorial to the Reichstag and the Federal Council. At the same sitting Dr. Hübner, of Leipsic, stated that he had applied to Count Zedlitz, the last Prussian Minister of Ecclesiastical, Educational, and Medical Affairs, with the offer to prove the curability of small-pox; but he had been referred to Professor Koch's experimental hospital, from which he had received the answer that the arrangements of the hospital did not allow Professor Koch to pay regard to individual opinions.—*Lancet.*

The Toronto Clinical Society is the latest addition to the medical societies of that city, the members being known as Fellows and classed as resident, non-resident, and corresponding. The president is Dr. J. Algernon Temple.

A Sad and Unusual Accident is reported to have occurred recently in the operating theatre of one of the London hospitals. One of the surgeons was engaged in sewing up the wound after a laparotomy, and, while in the course of doing so, he seems to have given a flourish to the needle in his hand, which penetrated one of the eyes of his assistant. The latter continued for some moments to attend to his duties, but was afterward compelled, owing to the pain in his eye, to leave the side of the operating table and sit down on one of the benches in the theatre. As soon as the operation had been completed, the surgeon examined the injured eye of his assistant, and found that the lens was lying outside the organ, the sclerotic extensively torn, and the vitreous protruding.

A Centenarian Physician.—Dr. De Bossy, of Havre, has reached his one hundredth year. He is still in practice, and has been awarded a medal for his conduct during the last cholera epidemic. He was present at a dinner given a few days ago in honor of his one hundredth birthday. In a speech which he made on the occasion he said his father had lived to be one hundred and seven years of age, and he hoped to do the same.

A Medical Velocipede Club has been formed in Paris for the purpose of bringing together medical men who use a velocipede instead of a carriage, and thus giving a moral sanction and support to their provincial colleagues. There are already a good number of members.

A Case of Asiatic Leprosy was recently discovered at Fort Wayne, Ind., by physicians. The patient is a Syrian woman.

A New Treatment of Alopecia Areata.—In France the above disease is known by the name of *pelade* and its parasitic origin is pretty generally accepted. Dr. Pye-Smith opines that many of these cases of *pelade* are in reality examples of ringworm in its later stages. However that may be, the practitioner will be glad to be made acquainted with the most recent treatment in vogue in Dr. Hallopeau's wards at St. Louis Hospital. When the affection is limited in extent rapid cure is obtained by

repeated applications of cantharides solution with daily use of a ninety per cent. carbolic lotion. Where the disease is more diffused (all the hairy parts of the body or the entire scalp) the following lotion gives good results: Alcohol, 100 gm.; essence of turpentine and camphor, of each 20 gm.; corrosive sublimate, 10 ctgr. Local patches have been successfully treated by M. Hallopeau by the application of essence of wintergreen, which produces no irritation or pain.—*Lancet.*

Mt. Sinai Hospital, New York.—On April 23d, the following appointments were made by the Directors of the Mt. Sinai Hospital: *Consulting Dermatologist*, Dr. S. Lustgarten; *Consulting Neurologist*, Dr. B. Sachs; *Assistant Visiting Physicians*, Dr. M. Manges and Dr. N. E. Brill; *Assistant Visiting Surgeons*, Dr. H. Lilienthal and Dr. W. W. VanArsdale; *Assistant Visiting Ophthalmologist*, Dr. C. H. May; *Assistant Visiting Gynecologist*, Dr. J. Brettauer: *Assistant Visiting Physician for Children*, Dr. H. Koplik.

Tolysal and Tolypyrin are two new remedies which belong to the antipyrin class. Tolysal is recommended by Hennig in doses of one to two grammes as an antipyretic, antirheumatic, and analgesic. Tolypyrin is recommended by Dr. P. Guttmann as a substitute for antipyrin, which drug it resembles in action and dose.

Proposed Change in the Coroner System of New York.—The following is the text of the bill drawn up by a committee of the Section on Public Health of the New York Academy of Medicine, and presented to the general meeting of the Academy, with the recommendation that it be received, ordered to be printed so as to be presented to the Fellows of the Academy for careful consideration, and transmitted to other local medical societies so that their co-operation might be asked for in order to accomplish the reform evidently demanded in the administration of the office.

An Act to transfer certain Duties now performed by the Coroners of the City and County of New York to the Board of Health, and to define the Method of Procedure in Cases of Sudden or Violent Deaths.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. In all cases in which a coroner of the city and county of New York, or a coroner's physician, was heretofore required by law to make a medical examination, and in all cases mentioned in section seven hundred and seventy-three of the Code of Criminal Procedure, the board of health of said city and county shall have complete jurisdiction and authority. Said board, by one or more of its physicians, appointed as hereinafter provided, shall perform the duties and make the examinations required by said section, and shall proceed without the aid or assistance of jurors. Said physicians shall make duplicate reports of their examinations and all of their proceedings, stating therein the cause of injury or death, and file one copy with the board of health and the other with the district attorney of said city and county.

Sec. 2. The board of health of said city and county of New York is hereby authorized to create a bureau to be known as the "Bureau of Inquests," and to appoint five competent physicians, to be known as "Inquest Physicians," who shall receive a salary not exceeding the sum of three thousand dollars each, and a clerk, to be known as the "Inquest Clerk," who shall keep a complete record of all inquests, and shall receive a salary not exceeding the sum of two thousand dollars, such salaries to be appropriated by the Board of Estimate and Apportionment when fixing their provisional and final estimates for the board of health.

Sec. 3. All the duties and jurisdiction heretofore vested in a coroner or the coroners of the city and county of New York, affecting civil actions, proceedings, and writs, and the service and execution thereof, shall be performed by and repose in the "collector of assessments and clerk of arrears" of said city and county.

Sec. 4. It shall be the duty of any citizen in the city and county of New York, who may become aware of the death of a person who shall have died from criminal violence, or by a casualty, or suddenly when in apparent health, or when unattended by a physician, or in prison, or in any suspicious or unusual manner, to report such death forthwith to the Bureau of Inquests, or to any police officer, who shall notify the Bureau of Inquests without delay of such death; and any person who shall wilfully neglect or refuse to report such death as above required shall, upon conviction, be adjudged guilty of a misdemeanor, and shall be punished by imprisonment for a period not exceeding one year, or by a fine not exceeding five hundred dollars, or by both such fine and imprisonment.

Sec. 5. Any person in said city and county, except an inquest physician, who shall wilfully touch, remove, or disturb the body of any one who shall have died in the manner described in the last section, or who shall wilfully touch, remove, or disturb the clothing, or any article upon or near such body, without a written order from an inquest physician, shall, upon conviction, be adjudged guilty of a misdemeanor, and shall be punished by imprisonment for a period not exceeding one year, or by a fine not exceeding five hundred dollars, or by both such fine and imprisonment.

Sec. 6. Whenever information is given at the Bureau of Inquests of the Board of Health that there has been found, or is lying, within the jurisdiction of said board, the dead body of a person who is supposed to have come to his death by violence, an inquest physician shall forthwith repair to the place where such body lies and take charge of the same, and if on view thereof and personal inquiry into the cause and manner of the death, he deems a further examination necessary, he shall in the presence of two or more discreet persons, whose attendance he may compel by subpœna if necessary, make an autopsy, and then and there reduce to writing every fact and circumstance tending to show the condition of the body, and cause and manner of death, together with the names and addresses of said witnesses, which record he shall subscribe. Before making such autopsy, he shall call the attention of said witnesses to the position and appearance of the body.

Sec. 7. If upon such view, personal inquiry, or autopsy, he shall be of opinion that the death was caused by violence, he shall at once notify one of the coroners of the city and county of New York, and shall file a duly attested copy of the record of his examination and autopsy in the office of said coroners, in addition to the reports made in accordance with section first of this act. The coroner shall thereupon hold an inquest which shall consist of the testimony of the inquest physician, and that of any other witnesses that the coroner may find necessary. Said inquest may be private, in which case any or all persons other than those required to be present by the provisions of this act may be excluded from the place where the same is held, and said coroner may also direct the witnesses to be kept separate, so that they cannot converse with each other until they have been examined. The district attorney, or some person designated by him, shall attend the inquest, and may examine all witnesses.

Sec. 8. The coroner shall have power to issue subpœnas for witnesses, returnable either forthwith or at such time and place as he shall appoint therein, and it shall be the duty of the coroner to give due notice of the time and place of the inquest to the inquest physician who examined and reported on the case, and it shall be the duty of said physician to attend said inquest.

Sec. 9. The coroner shall, after hearing the testimony, draw up and sign a report, in which he shall find and

certify when, where, and by what means the person deceased came to his death, his name, if known, and all material circumstances attending his death; and if it appears that his death resulted wholly or in part from the unlawful act of any person, he shall further state, if known to him, the name of such person, and of any person whose unlawful act contributed to such death, which report shall be returned by him to the office of the district attorney of the city and county of New York.

SEC. 10. Any police justice in the city and county of New York is hereby authorized and empowered, in case the attendance of a coroner cannot be procured within twelve hours after the discovery of a dead body, upon which an inquest is now by law required to be held, to hold an inquest thereon, in the same manner and with the like force and effect as coroners.

SEC. 11. From and after the passage of this act no person shall be eligible to the office of coroner who is not a duly qualified lawyer.

SEC. 12. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

SEC. 13. This act shall take effect on the expiration of the terms of office for which the present coroners of the city and county of New York were respectively elected.

Obituary.

MILTON JOSIAH ROBERTS, M.D.,

NEW YORK.

THE news of the death, by pneumonia, of Dr. Milton J. Roberts will be a surprise and shock to the many who knew him and appreciated his great talents. Dr. Roberts was a most ingenious, original, and indefatigable worker in orthopædic surgery. Some years ago he was very active in scientific societies and literary work.

Dr. Roberts died on Wednesday, April 26, 1893, aged forty-three. He graduated at Cornell University with honors, and received his medical degree at the University College in this city in 1878. He soon interested himself in orthopædic surgery, and was for several years professor of this branch in the Post-graduate Medical College and in the University of Vermont. He was also surgeon to the Randall's Island Hospital.

Dr. Roberts contributed many articles to medical journals on description of his inventions. The woven-wire corset and various instruments for measuring and correcting deformities were devised by him.

Reviews and Notices of Books.

HANDBOOK OF MATERIA MEDICA, PHARMACY, AND THERAPEUTICS. By SAMUEL O. L. POTTER, A.M., M.D., M.R.C.P.Lond., Professor of Theory and Practice in Cooper Medical College, San Francisco, etc. 4th edition. 8vo, pp. 780. Philadelphia: P. Blakiston, Son & Co. 1893.

THE difference in time between the third and fourth editions of this work is a little over a year. In fact, so recently have we given notice of its contents that it is not necessary now to repeat what was then said. In this edition several new remedies are introduced, particularly aristol, chloralamid, diuretin, phenacetin, and piperazin, and many other preparations that are less known. The work as a whole is destined to hold its own as a text-book and as a useful and practical guide to the busy practitioner.

TRANSACTIONS OF THE ASSOCIATION OF AMERICAN PHYSICIANS, held at Washington, D. C., May 24 to 26, 1892. Volume VII. Philadelphia: Printed for the Association.

THIS seventh volume contains a complete report of papers read and discussions held.

GENITO-URINARY AND VENEREAL DISEASES. By CHARLES H. CHETWOOD, M.D., Philadelphia: Lea Brothers & Co.

A NEATLY-WRITTEN manual, giving a series of questions and answers which adapt themselves to beginners in the above-named diseases. It contains 173 pages, good clear type, and is written concisely.

CONGENITAL OBLITERATION OF THE BILE-DUCTS. By JOHN THOMSON, M.D.

THIS littte work is the outcome of a thesis presented to the Edinburgh University on Graduation, and also of reprints from the *Edinburgh Medical Journal*. Interesting cases with carefully prepared tables and plates are presented. The plates illustrate "Congenital Obliteration of Bile-ducts," "Congenital Obliteration of Small Intestine," "Congenital Obliteration of Gall-bladder."

A STUDY OF INFLUENZA AND THE LAWS OF ENGLAND CONCERNING INFECTIOUS DISEASES. By RICHARD SISLEY, M.D. London: Longmans, Green, & Co. 1892.

THIS is a carefully prepared book, illustrated with charts and embodying papers read before the Epidemiological Society, May 20, 1891, and an abstract of a paper read at Seventh International Congress of Hygiene, August, 1891.

THE HYGIENE OF THE SICK-ROOM. A Book for Nurses, and Others. Being a Brief Consideration of Asepsis, Antisepsis, Disinfection, Bacteriology, Immunity, Heating and Ventilation, and Kindred Subjects, for the Use of Nurses and Other Intelligent Women. By BUCKINGHAM CANFIELD, A.M., M.D., Lecturer on Clinical Medicine and Chief of Chest Clinic, University of Maryland, etc. Philadelphia: P. Blakiston, Son & Co. 1892.

THE author has here tried to point out for the guidance of those who nurse the sick the relation between bacteria and the spread of disease, and the manner in which the former may be destroyed. The work is based upon a series of lectures delivered at the University of Maryland Training School for Nurses. Much valuable information is to be found in the chapters on contagious diseases. In view of a possible outbreak of cholera more might have been said about nursing in this disease, especially as most nurses here have received little instruction in regard to it, on the supposition that this country is exempt.

THE MASTOID OPERATION, INCLUDING ITS HISTORY, ANATOMY, AND PATHOLOGY. By SAMUEL ELLSWORTH ALLEN, M.D. Cincinnati: Robert Clarke & Co. 1892.

THE author gives in this little volume of a hundred odd pages a concise and at the same time clear account of the operation for opening the mastoid cells, tracing the history from the period of clinical observation which preceded the first somewhat crude attempts.

The author claims no originality for his monograph, still it is very evident that the knowledge obtained at the clinic of Professor Schwartze has been largely supplemented by original anatomical investigations on his own part, resulting in valuable rules of procedure in order to avoid injury of important structures.

While the historical portion is well worth reading, the chief value of the book lies in the anatomical and pathological features of the region, which are discussed in so plain and intelligent a manner that one is kept constantly reminded of the operation to which the whole leads up.

Besides giving a description of a typical operation, with every step carefully considered, unusual conditions and plans to meet them are described. Stacke's original and modified operation are given and Lucæ's method is gone over.

Five page plates, to which frequent reference is made in the text, aid in making the descriptions clear.

Society Reports.

GEORGIA STATE MEDICAL ASSOCIATION.

Proceedings of the Forty-fourth Annual Meeting, Held at Americus, April 19, 20, and 21, 1893.

FIRST DAY, WEDNESDAY, APRIL 19TH—MORNING SESSION.

THE Association convened in the City Hall and was called to order by the President, DR. A. A. SMITH, of Hawkinsville, at 10 A.M. Prayer was offered by the REV. A. M. WILLIAMS.

An Address of Welcome was delivered by Mayor A. S. CUTTS, which was responded to on behalf of the Association by Dr. MARK H. O'DANIEL, of Macon.

The President's Annual Address, by DR. A. A. SMITH, was the first paper read. President Smith said that Georgia had her boards of education, her boards of trade, and her various other boards, but she had no board of health. The sanitary condition of her two million inhabitants, dwelling within the borders of one hundred and thirty-seven counties, should be looked after and cared for in an official way; and a board of health, composed of the best medical talent in the State should be established for that purpose. He knew of nothing that would be more conducive to the protection of the general health and prosperity of the people than the permanent establishment of a State Board of Health. He also recommended the permanent establishment of a State Board of Examination, and said no one should be allowed to practise medicine within the borders of the State until he shall have passed a rigid and satisfactory examination under this board, and received therefrom a certificate of proficiency. This would drive away quacks, and thereby not only protect the health and the lives of the people, but also the honor and the dignity of the profession. Furthermore, the curriculum of medical institutions in Georgia should be raised to a higher standard. Nothing less than the three-course system should be tolerated, and each of these courses should be made broader, deeper, and more comprehensive. With a State Board of Health and a State Board of Examination permanently established, and the curriculum of the Georgia medical schools raised to a higher standard, the profession would greatly accelerate the onward and upward progress of such a cause, and as it moved up onward and upward, higher and higher, mantled with the glory of its past, and crowned with the splendor of its future, God's truth would bloom upon its brow, and God's approbation rest upon its work.

DR. C. C. HART, of Cross Keys, read a paper entitled "Shot-gun Prescriptions," in which he asked whether it was right to make what is known as shot-gun prescriptions. Personally he thought it was not right, because it increased the difficulty of prescribing, and made the therapeutic action of medicines more uncertain, and consequently less safe for the patient. We should strive to make medicine an exact science, which we could never hope to do without exact knowledge, and how are we to know what effect a certain medicine has when it is combined with several other medicines, some of them perhaps of an antagonistic nature?

DR. J. I. DARBY, of Americus, contributed a paper entitled "Puerperal Septicæmia and its Treatment."

AFTERNOON SESSION.

Puerperal Eclampsia, with a Report of Cases, by DR. J. M. HEAD, of Zebulon, was the first paper read. True eclampsia might differ from epilepsy, clinically, but the paroxysms of each were essentially the same. We find in eclampsia occasionally premonitory symptoms which, if properly interpreted by the obstetrician, will put him upon his guard and sometimes enable him to ward off the attack. However, in a considerable number of cases the symptoms are so slight as to escape detection, and suspicion is not aroused until severe convulsions are on. Hence we find it is of practical importance to bear well in mind the most common of the symptoms which are associated with cerebral troubles, such as severe headache, either general or unilateral, spots before the eyes, dizziness, blindness, vertigo, or impairment of the intellectual faculties, which are occasionally observed. Again, we see symptoms manifested in restlessness, irritability of temper, stupor, general indisposition, œdema of the cellular or subcutaneous tissue, shown by swelling of the lower extremities, but this one symptom bears with it a much more serious import when it is observed as occurring in the upper extremities or a swollen face. These symptoms are sufficient to excite the most serious apprehensions and lead us to make examinations of their causes. So eclampsia should be considered of a functional nature through reflex influences, as chorea is an occasional feature of pregnancy. For the purpose of elucidation the speaker mentioned the prominent disorders of the pregnant stage.

Contagiousness of Consumption.—DR. J. G. HOPKINS, of Thomasville, read a paper on this subject. The speaker said he had joined the growing army which placed tuberculosis in the category of contagious diseases, and his experience with this disease during nineteen years of investigation in Thomasville—which place is a resort for consumptives—bore him out in his opinion, and made him a willing subject of the great and erudite Koch. He does not doubt but that all men, women, and children, at some time or times, receive into their air-passages the tubercle bacilli, but fortunately the great majority possessed the power of repelling them and throwing them off—they did not find that soil, so to speak, which is adapted to their growth. Indians in a state of nativity seemed impervious to the germs of consumption, but were now dying by thousands on the reservations. The whites and the blacks in prisons all over the world labored under similar conditions. A report from the Illinois State Prison, at Joliet, says that there are 1,400 convicts within the walls, and fully one-third of them have consumption in a light or bad form. Nearly all deaths of persons in the penitentiary have been caused by consumption.

Dr. Hopkins emphasized the danger that lurks in sleeping-cars, in carpets, bedding, clothing, and in the walls of apartments occupied by consumptives, which have not been properly renovated and rendered harmless by antiseptic measures. Consumptives should be forced to provide for the destruction of sputa. Whenever situated so as not to expectorate directly into a germicide or the fire, they should use some means of conveying the sputa to the germicide or the flames. If handkerchiefs or clothes are used, they should not be sent to the laundry, as human happiness and life are jeopardized through the probability of inoculation through abrasions upon the hands. These bacilli should never be allowed to dry up and impregnate the air, as is now done through ignorance of possible result. Numerous experiments by leading medical authorities have proven beyond doubt that consumption is an inoculable disease, and so rapidly is the throng of converts growing that the speaker would not be surprised, if, even in his day, resorts now soliciting the patronage of the consumptive will be quarantining against him.

Science in Medicine and Surgery.—DR. J. MACFADDEN GASTON, of Atlanta, read a paper on this subject. He said at this time the medical profession was undergoing a most interesting transition from the extreme views which had been held by some in regard to the employment of germicides in surgical practice. There was a time within the past decade when it was deemed to be scientific and progressive to use antiseptic measures of the most energetic kind in all operations, whether there was a septic element to combat or not. But, thanks to the mature investigation of the effects of germicides upon normal structures by bacteriologists for this class of work,

it has been demonstrated that the so called antiseptic agents are capable of setting up septic processes in healthy tissues. The tables are now turned, and instead of a surgeon being compromised by eliminating germicides from his surgical procedures in ordinary cases, and confining his irritation of recent wounds to simple sterilized water, it is he who departs from this course by the employment of solutions impregnated with toxic agents who is held responsible for the consequences of their absorption. In case there is a healthy and normal state of structures involved in a cutting operation there can be no indication for antiseptics, and their use is only calculated to do harm by absorption, and the best men in the profession have ceased to employ them. The most energetic, and hence the most likely to cause mischief, is corrosive sublimate. Dr. Gaston quoted Dr. Vance, of Louisville, as saying that it was beyond all doubt that the present position of bichloride was rather against its use, and that it did more harm than good, as demonstrated by Welch and Abbott.

Multiple Neuritis, Alcoholic.—Dr. Mark H. O'Daniel, of Macon, read a short paper on this subject, and reported a case. The patient was thirty-six years of age, fleshy, short build, short neck, florid complexion, of bilious temperament, and a book-keeper by occupation. The patient had taken but little exercise for quite a long while, except in the elbow-joints. He came of a nervous ancestry, an aunt having died of climacteric mania, and other relatives had been insane for a short time, showing beyond doubt a predisposition on part of the patient to nervous trouble, which, if it had not existed, the use of alcohol might not have precipitated the disease in question. The patient drank from one to two quarts of whiskey a day, that is during twenty-four hours. He had all the symptoms of such cases. Under appropriate treatment the patient made a good recovery.

Syphilis from a Sociological Stand-point.—Dr. Willis F. Westmoreland, of Atlanta, followed with a paper on this subject, in which he said, year after year, particularly in the clinics, syphilitic subjects, a great many of them women, came before him suffering from this disease in all its stages, from the original lesion to the worst ravages of the second and tertiary stages, with mucous patches and syphilitic ulcers covering them. And when he found upon investigation many of them servants, occupying various household positions as chambermaids, nurses, cooks, waitresses, etc., he could not but think that God protects the family exposed to the baleful contamination of their service, and particularly the poor little defenceless ones whom they nurse, and with whom their relations are so intimate. Anyone who has not investigated the subject will be overwhelmed with surprise at the number of cases acquired otherwise than by sexual intercourse, and the various means by which it has been transmitted. Physicians and dentists are themselves exposed, and likewise expose their patients to these dangers. Thousands of physicians and midwives, in the practice of their calling, in examining and operating on syphilitic subjects, or by autopsy, are exposed; dentists by having their fingers scratched against a rough tooth or instrument, while working on a patient whose mouth is filled with mucous patches. On the other hand, many more patients are infected by the carelessness of physicians.

Second Day, Thursday, April 20th—Morning Session.

Elastic Constriction as a Hæmostatic Measure.—Dr. W. H. Elliott, of Savannah, addressed the Association on this subject, his remarks being a review of Senn's method. He said the Association was familiar with Esmarch's method, which consisted in putting on an elastic bandage from the periphery slowly and gradually, so as to empty the limb of blood, putting it on up to a point just above where the surgeon is going to operate. He then puts on a narrow elastic band at that point, so as to cut off the circulation from the limb entirely, then removing the compression bandage to go on with the operation, which he had fitly called "a bloodless operation." Esmarch was not the inventor of the bloodless operation, but surgeons were indebted to his genius for improving its technique and for making this established method a popular procedure in surgery. The speaker then stated the two grave objections against the method as used by Esmarch, as advanced by Dr. Senn. The first objection was that forcible compression of the blood out of the tissues by an elastic bandage was liable to send into the surrounding tissues the elements of microbic and malignant diseases. Cancer-cells may thus be scattered and disseminated through the system, or the cells of pus or of tuberculosis might be sent abroad to do damage elsewhere. The second objection raised was that the constricting of the limb with a tube or a narrow bandage at one point was liable to do injury first to the muscle and secondly to the nerve. Dr. Elliott had used Esmarch's method, as modified by Dr. Senn, with great satisfaction.

Dr. O. H. Buford, of Cartersville, reported a rare case in obstetric practice, showing hour-glass contractions on fœtus.

Persistent Remittent so-called Typho-malarial Fever.—Dr. W. P. Williams, of Blackshear, read a paper with this title. The author gave an analysis of a few cases of persistent remittent fever, touching its diagnosis and differential diagnosis from typhoid fever especially. He presented the clinical side of the matter, as his investigations extended no farther. He presented three forms for consideration: 1st, The abortive form, or such as are immediately amenable to treatment; 2d, the continued form with low temperature; 3d, the continued form with high temperature. Under the first form he was called to see the case of a negro that had been sick about a day. He found a temperature of 106° F.; no other striking symptom. He gave him fifteen grains of quinine, and left two other doses to be repeated at six hour intervals. His diagnosis and prognosis were persistent remittent fever with the prospect of a long siege. He returned the next morning and found that the patient was up and gone.

The value of a diagnosis between these maladies was apparent when we came to the subject of treatment. The treatment which the speaker had followed, which had proved reasonably successful in persistent remittent fever, was the anti-malarial preparation, principally cinchona and its derivatives, and arsenic, with cholagogue cathartics (most frequently calomel) at stated intervals, applying other medicines as they were indicated. This treatment, while very beneficial in a large number of malarial cases, he would consider utterly useless and even dangerous in applying it to typhoid fever cases. The author closed his paper by saying that for every degree in rise in temperature there was a corresponding increase of heart action from eight to ten beats. In several of his cases of this fever this ratio was completely destroyed, and in some the reverse took place.

Periproctitis, with an Abscess, and Report of a Case.—Dr. M. L. Currie, of Mount Vernon, read a paper with the above title. He said periproctitis was one of those infrequent inflammatory diseases which the general practitioner might at any time be called to treat, and which he might fail to recognize until much damage to his patient ensued. It is usually suppurative in character, but a cure may be effected by absorption, even after a distinct tumor is formed. Of the cause of the disease but little can be said. It may result from traumatism, foreign bodies, extension of adjacent inflammatory processes, or any structural disease involving the mucous membrane of the rectum. The manner of its extension and the course of the morbid processes excited are identical with those seen in perityphlitis following typhlitis. The prognosis depends much upon the time when a diagnosis is made, the treatment of both the inflammation and the abscess, as well as the physical condition of the patient. When the vitality is low and the abscess high

up in the pelvic cavity, or when the patient is tuberculous it is unfavorable; when otherwise, we may hope for recovery. The author then gave the diagnostic symptoms, and the treatment in connection with the case he reported.

Ectopic Pregnancy, Its Pathology, Symptoms, and Treatment.—Dr. R. R. Kime, of Atlanta, followed with a paper on this subject. After dwelling upon the pathology and symptoms the author summarized the treatment as follows: 1. In primary or secondary intra-peritoneal rupture of ectopic sac operate by cœliotomy at once. 2. Before primary rupture, with diagnosis of tubal pregnancy, extirpate cyst, tube, and ovary. Fœticide for this condition by electricity and morphia injections are but temporary expedients suitable for cases of doubtful diagnosis, or where a competent operator cannot be obtained. Their use only allures patients into a false hope of security when delay is dangerous. If diagnosis could be made in first three or four weeks of pregnancy, then electricity might accomplish more potent results. 3. With extra-peritoneal primary rupture into broad ligament in early weeks of gestation, producing pelvic hæmatocele, wait for absorption of effused blood: if it fail, then perform cœliotomy or vaginal drainage. 4. If child survives primary rupture of tube into broad ligament, do not commit murder, keep a clean conscience toward God and man, let fœtus live, keeping patient under strict observance, ready to operate at any time when life of patient demands it, or fœtus has at least reached a viable period. By waiting for development of fœtus and cyst, as Tait claims, the peritoneum is pushed up on the side in which they are located, so that in later months of pregnancy a lateral incision will enter cyst, and fœtus may be extracted without entering abdominal cavity. 5. Surgical interference should be the rule in all cases of ectopic pregnancy reaching full term, even after spurious labor and death of fœtus.

A Board of Medical Examiners; the State's Medical Duty.—Dr. Luther B. Grandy, of Atlanta, read a paper on this subject, in which he suggested the advisability of taking steps toward the establishment of a board of medical examiners in Georgia. The question under discussion was one which touched every home in Georgia, into which sickness or accident would surely come at one time or another. There were two classes of so-called doctors from whom the people of this and every State need to be protected. One was the ignorant practitioner without capacity, the other was the unprincipled charlatan without conscience. The absence of such a board, and the fact that a diploma was a license was but throwing down the bars to all the incompetent and fraudulent who were being rejected in other places. And here was the point of the matter which was of the most interest to physicians, because it had such a bearing upon the *personnel* of the profession of the State. If the medical profession in Georgia was to be made up largely of those who had been refused by other States on account of incompetency or dishonesty, then it was time we were entering our protest at once. There were about two thousand seven hundred physicians in Georgia, and still they came, and all were welcome. None were ever rejected. By a reasonable estimate about seven hundred of these would have been declared unqualified in other States. There had been nearly four hundred rejections by the Virginia and North Carolina boards within the last seven years. What became of all those persons who were examined and declined by the boards of New Jersey, Virginia, North Carolina, Florida, Alabama, Illinois, Minnesota, and other States? Our neighbors, Alabama, South Carolina, and Florida, have rejected respectively twenty, twenty-nine, and thirty per cent. of their applicants. Where do these people go? As for the quacks, when driven from one place they quickly take refuge in another. They change their sky but not their affections (*Cœlum, non animum, mutant*). Like other moving bodies, they travel along the lines of least resistance until they find some place still willing to receive and patronize them. Dr. Grandy closed by saying that if Georgia would like to divorce the right to practise medicine from the empty honor of having a diploma, if she would like to bring about higher standards in her medical schools and stimulate her students to higher aims, if she would like to improve the *personnel* of the medical profession in the State and endeavor to make it what it should be, an intelligent, honest, and conscientious body of physicians, then let there be established a Board of Medical Examiners, who shall be untrammelled of any college connections, and who shall determine whether a given applicant is qualified to practise medicine in Georgia.

The Practice of Medicine in Georgia.—Dr. Arthur C. Blain, of Macon, contributed a paper on this subject. He called attention to the want of laws governing the practice of medicine in the State. He also emphasized the importance of creating a State Board of Medical Examiners. Georgia was made a dumping-ground for all who failed to pass the requisite examination to obtain a license to practise in Virginia, Florida, or Alabama. State Boards not only afforded protection to the people from charlatans and unqualified practitioners, but exerted a salutary influence toward elevating the educational standard of the medical profession. The speaker recommended that a committee be sent to Atlanta during the next session of the Legislature to assist in formulating and passing some good law that would meet the requirements of the case.

Dr. J. C. Avery, of Atlanta, followed with a paper on "State and Municipal Hygiene."

The three papers were ably discussed by Drs. C. D. Hurt, R. O. Engram, Willis F. Westmoreland, W. H. Elliott, F. W. McRae, M. B. Hutchins, and a committee of one from each Congressional district was appointed for the purpose previously outlined.

Afternoon Session.

Etiology of Puerperal Eclampsia; Its Treatment, with Report of Some Typical Cases.—Dr. C. D. Hurt, of Atlanta, read a paper on this subject. After a careful study of various authors, and summing up his observations and experience at the bedside, the author felt warranted in offering the following conclusions: 1. That eclampsia gravidarum in every case is the result of some influence which is directly or indirectly exerted upon the nervous system, causing a derangement of its functions. 2. That such influences may exist singly or be co-operative, and that such influence may be direct violence or mechanical pressure. 3. That one or more of these influences may reach the nervous system by absorption or through the circulation. 4. That by chemical changes wrought under certain conditions in the system toxic elements may be created and prove deleterious. Again, certain elements are harmless as they exist in normal proportions in the constitutions, but exert a toxic influence in abnormal quantities. Urea as a toxic element abnormally increased by retention in the system is assigned by many as the most frequent cause. Yet there are some who do not hold to this opinion. All admit that eclampsia and uræmia coexist in a very large per cent. of cases, while they disagree as to their relation of cause and effect. Furthermore, all admit that uræmia cannot be found to exist in every case of eclampsia, therefore other causes than uræmia can and do produce eclampsia. That in every case irritation may and does exert an influence which materially aids in bringing on a seizure, and that in many cases this irritation, intensified by protracted labor, hard pains, unyielding os, and exhaustion of the nervous system, develops eclampsia. That a plethoric condition of the patient, full habit, distended blood vessels, increased susceptibility to an apoplectic condition and excessive irritability, and that with this plethora a crowding of the blood into the lungs and upon the brain materially interfere with the functions of the nervous system. That the emotional system is not silent in some women, and that it helps to precipitate a fit.

Four Women Who Refused Oöphorectomy and Their Subsequent Histories.—Dr. H. McHatton, of Macon, read a paper with the above title. The author gave a brief *résumé* of the histories of the only four women that he had ever known who refused the operation. The time that had elapsed since it was advised varied from eighteen months to twelve years. The speaker made the point that in each case the operation was advised and urged by gynecologists of standing both North and South; consequently they must have been convinced that they were cases demanding operative interference. In a practice of twelve years he had had occasion to recommend the removal of the appendages once, excepting cases of ovarian tumors, and that one proved to be a case of pyosalpinx. Several of his patients had drifted into other hands and had oöphorectomy performed, and as far as he could learn had been disappointed in the results each time. The best men in this special line of work were doing the operation less and less each year. Their place was being amply filled by lesser lights, with smaller numbers of individual cases, but with a yearly aggregate that is terrible to contemplate. By what combination of circumstances could one man, to fame unknown, in a small interior city, and in a short space of time, find one hundred and forty-four cases demanding abdominal section?

Partial Tenotomy a Radical Cure for Heterophoralgia.—Dr. C. H. Peete, of Macon, contributed a paper on this subject. The author finds that the majority of cases suffering from heterophoralgia are those of young adult life, or that they have been sufferers since that time. He accounts for it by the fact that we know in order to cause it the patient must concentrate his vision on an object, and the length of time of this concentration governs the intensity of suffering. In children the vision is never fixed on any point for a length of time, consequently the symptoms are not brought on. In young adults who have acquired the habit of hard study and constant close work, it occurs frequently, and we will find in most cases that it commenced with the time of their beginning to work or in a short time after. The muscle tests should be applied to every case that came to the oculist for refraction work, and when he finds these deviations existing he should resort to the radical relief—partial tenotomy.

Stone in the Bladder, with Report of Cases.—Dr. F. W. McRae, of Atlanta, read a paper with the above title. He dealt with the etiology, symptomatology, and treatment of stone in the bladder, purposely avoiding extensive details and references to authorities. The chief predisposing causes were defective digestion and assimilation, due either to improper diet, to a preponderance of solid over liquid ingesta, or to too high living coupled with insufficient exercise and imperfect oxidation. There is an excess of the solids of the urine. These are only predisposing causes, and others, such as mucus, pus, etc., due to inflammatory conditions of the urinary mucous membrane, must be present before stone in the bladder will result. A history of nephritic colic not followed by the expulsion of the gravel through the urethra, would naturally lead us to suspect the formation of stone in the bladder when followed by irritation of that viscus. Only when the stone can be felt by the searcher and the characteristic click elicited are we sure of the presence of calculus of the bladder. In one of the cases which the author reported the symptoms were characteristic of stone in the bladder, although no stone was found. The operation was a brilliant success in relieving the patient of a most violent cystitis of long standing. The author then dealt with the methods of treating stone in the bladder, and said that no method had so wide a range of applicability and as low a death-rate as litholapaxy (Bigelow's operation). He had had, however, no personal experience with it, as the cases thus far presenting themselves to him were such as might be best treated by other procedures.

This operation offered much the best results except in very young children, very large or very hard stones, or where there was co-existing tight organic strictures or enlarged prostate of such character as to prevent the introduction of the lithotrite, or where there was a violent cystitis associated with stone. For large stones associated with prostate or vesical tumors the high operation was undoubtedly far superior to the perineal operation. Small stones associated with stricture of the deep urethra or violent cystitis were best treated by the median operation. Nor was the lateral operation to be entirely set aside for the now more popular operations of litholapaxy and supra-pubic lithotomy. Each of these operations had its proper field of usefulness, and it was only by a careful selection of the methods of treatment that the best results were to be obtained.

Dr. W. R. Googe, of Abbeville, reported a case of fracture of the skull, with protrusion of the brain substance and removal of same.

Third Day, Friday, April 21st—Morning Session.

The Technique and After-treatment of Ovariotomy.—Dr. J. B. S. Holmes, of Rome, read a lengthy paper on this subject. The author offered the paper as an *exposé* of the methods adopted and successfully used by him in his abdominal work. He submitted the paper with the earnest hope that it might elicit a full and free discussion from all those interested in this line of work. By such discussions our methods may be compared and those adopted that promise best results to our patients. No one could truthfully say that in every particular his method was the best. While we might in the main agree, yet upon slight and seemingly indifferent details might hinge the successful issue of our cases. He stood ready and willing to take up any suggestions from his brother surgeons if he could get better results by so doing. The author then took up each step *seriatim* of the technique and after-treatment.

Dr. Frank M. Ridley, of La Grange, then delivered the Orator's Address. He selected for his subject "Woman's Relation to the Practice of Medicine."

Mechanical Treatment of Some Skin Anomalies.—Dr. M. B. Hutchins, of Atlanta, contributed a paper on this subject. The author dwelt upon some of the various mechanical means of removing anomalies of the skin. The destruction of superfluous hairs, of moles, birth-marks, and the various simple growths of the skin were described. In 1879, Dr. Michael, of St. Louis, successfully employed electrolysis for the destruction of the hairs in trichiasis. Dr. Hardaway, a dermatologist of the same city, followed the idea in the treatment of hypertrichosis. Various demonstrations have since been reported upon its successful use. Hair upon the lip and face of women afforded the usual field of operation. Three to eight cells of a galvanic battery were used. For the past two years Dr. Hutchins had used some "Law" cells, put together by himself, containing as the fluid an aqueous solution of sal ammoniac. For the destruction of hairs five of these were sufficient, though they had not been filled in two years. Seven of these cells sufficed for ordinary moles. To the negative pole a pencil-shaped needle-holder containing a No. 8 or 12 ordinary sewing-needle is attached, while the positive pole is provided with the usual sponge electrode. The needle is attached to the negative pole for the reason that electrolysis through the positive will leave a black dot at the point of insertion of the needle. The author prefers the needle-holder having a spring for opening or closing the circuit, as this leaves the entire control of the circuit to him, the patient steadily holding the well-wetted sponge electrode in one hand, instead of having to open and close the circuit by letting go or catching hold of the sponge. The needle is carefully inserted into the hair follicle, parallel to the root, until slight resistance, the bottom of the follicle and the seat of the hair papilla, is felt. The circuit is then closed and the current allowed to pass until a frothy substance the size of a small pin-head fills the follicle, and a small area of blanching appears around the needle. If the needle has followed

the course of the hair-root and remained in the follicle the pain is less than when the root-sheaths are pierced, and the frothy substance is more abundant. If the hair is easily pulled out it is reasonably certain that there will be no regrowth, but if it pulls out with difficulty or breaks off, the current must immediately be reapplied. A pair of forceps made for the purpose are used to extract the hairs.

Dr. Hutchins then reported several interesting cases which he had treated successfully by electrolysis.

Election of Officers.—The following officers were elected: *President*, Dr. W. H. Elliott, Savannah; *First Vice-President*, Dr. C. T. Miller, Americus; *Second Vice-President*, Dr. H. McHatton, Macon; *Secretary*, Dr. Daniel H. Howell, Atlanta; *Treasurer*, Dr. E. C. Goodrich, Augusta.

The next annual meeting of the Association will be held in Atlanta.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, March 27, 1893.

WILLIAM STEVENS, M.D., VICE-PRESIDENT, IN THE CHAIR.

The Late Dr. Laurence Johnson.—On motion of DR. DANIEL LEWIS the President was authorized to appoint a committee of three to prepare a suitable memorial of the late Dr. Laurence Johnson.

The Therapeutics of Current Direction and Polar Action in Nervous Diseases.—Dr. A. D. Rockwell read the paper.

Electricity Useful only in Functional Nervous Diseases.—DR. FREDERICK PETERSON said he had not much faith in electricity for organic nervous diseases, but he thought it was often of benefit in many functional nervous diseases, such as neuralgias and local spasms. And in the treatment of these he thought there was a great difference of influence between the two poles. He found the cathode or negative pole increase irritability, the anode or positive diminish it. As a rule the two poles should be far apart. He did not think the direction of the current had much to do with the case. For instance, it had often been said that in applying electricity to the spinal cord it was important whether the current ascended or descended, but the speaker thought the direction of the current was a matter of indifference; that is, it made no difference which pole was above and which below. He did not believe Dr. Rockwell's demonstration on the frog's leg was conclusive. The difference of current required to get a stimulating effect might perhaps have been due to changing the electrodes from one side to the other, encountering a difference in the amount of resistance in the skin.

Direction of the Current Unimportant.—DR. WILLIAM JAMES MORTON also disagreed with the author in the view that the direction of the current made a great difference in the influence produced upon living tissue. He was willing to grant that there was a specific effect at the pole, just as there was in chemical experiments, acids going to the positive pole, bases to the negative. This chemical effect, indeed, was the explanation of the physiological effects of electricity on the human system, but instead of being carried to the point of destruction of the tissues the current was used only for its stimulating or sedative effect, the negative pole being the more stimulating or irritating, the positive the more sedative. That, he thought, was about the only explanation to be given for distinctions in polar effect. He knew of no experiment which had demonstrated at all satisfactorily that the direction of the current had the slightest influence. The experiment made by the author on the frog was susceptible of a great many explanations. It certainly was open to the objection that the two poles were not far enough apart. The view that the direction of the current made a difference in the effect had been inquired into and rejected by Erb and others.

DR. MARY PUTNAM JACOBI agreed with those authorities who were of the opinion that the direction of the current did not influence the physiological or therapeutic effect. The therapeutic influence of the electrical current was not to be explained by the results obtained upon exposed nerves of frogs. As to the relative sedative influence of the negative and positive poles, she had found, at least in the illy-defined peripheric pains of the hysterical condition, that the cathode was as sedative in its influence as the positive pole. She thought the view of Anestie and Mauritz Meyer was true of many cases at least, that the effect was more beneficial if one pole was placed over the root in the cord of the affected nerve while the other was put at some indifferent place rather than on the seat of pain; at any rate let one pole be at the root of the affected nerve.

DR. ROCKWELL closed the discussion. On most points there was no great difference of opinion between the speakers and himself. He had long ago given up the idea that anything but the chemical effect of the current would account for its influence in producing or allaying irritability in a nerve. But the important point contained in his paper had not been alluded to by the speakers, and that was the complete elimination of the action of one pole from the body while obtaining that of the other. In other words, he used one electrode in which the neutral point was in the electrode itself and not at the surface of the body with which it came in contact, while the diseased nerve was brought under the influence of the other electrode or pole, so that only the chemical effect of that particular pole was obtained. Now, according to whether the depolarized electrode were placed proximally or distally in relation to the other electrode, he had found the effect to differ as stated in his paper. The ascending positive, for instance, stimulated more than the descending positive. While this had been shown to be true by experiments, he was unable to say to what extent it would prove useful in therapeutics. If those who had discussed his paper would experiment with the depolarized electrode they would, he thought, appreciate this difference of influence depending upon whether the current ascended or descended.

Removal by Electrolysis of an Extensive Hairy Nævus of the Face.—DR. GEORGE HENRY FOX presented the patient and photographs illustrating the different stages of the treatment. The nævus was a large and rather prominent one, somewhat horny, covered with coarse hairs, occupying the centre of the face, extending on the lower eyelid and side of the nose. The treatment had been by electrolysis, inserting into the tumor a flexible small needle connected with the negative pole of the galvanic battery, thus first reducing the size of the tumor and causing the pigmentation to disappear. The hair follicles had to be destroyed by introducing the needle into the root of each one of them successively, a tedious process which had extended over many months. Surgeons might be disposed to scoff at this expenditure of time and patience, and resort to the knife with, perhaps, skin grafting. But it would not have been possible by surgery to obtain so perfect a result; some scarring or contraction would certainly have taken place, whereas by electrolysis the face had been left in a condition in which one could hardly detect a difference between the two sides, and what little defect still existed would quite disappear within a year or two. Caustics would have been even more objectionable than surgery, as the extent of their influence could not be entirely controlled.

The Practice of Obstetrics by Midwives in New York.—DR. JULIUS ROSENBERG read a brief paper on this subject. In a recent article in one of the New York journals it had been stated that about one-half of all obstetric cases were attended by midwives. Dr. Rosenberg had doubted this statement until it had been confirmed by reference to the vital statistics of the city, Dr. Nagle replying to his letter of inquiry that during the year 1891

the number of births reported by physicians was 24,134, the number reported by midwives 22,720. He then inquired as to the laws regulating the practice of obstetrics by midwives, and found that in this city there were none whatever except the simple demand that they register their names and pay a fee of fifty cents. On the other hand, doctors were required to have a diploma and to pass an examination before a State Board of Medical Examiners. Who could estimate the number of lives lost or wrecked, both maternal and infantile, through failure on the part of ignorant midwives to recognize faulty presentations, etc., and to give timely notice to a capable physician. Midwives here were all ignorant of their profession, their only information being of that dangerous kind acquired from the talk of old women. The danger of a continuation of such a system was shown by the fact that in New York City the number of still-births was eight per cent., while in Berlin, where the practice of midwifery was under stringent regulations, the number of still-births was but a trifle more than three per cent. Puerperal septicæmia was also much more common here where midwives were allowed to practise without any knowledge of their profession. The requirements in the way of a knowledge of midwifery and the laws regulating its practice as they prevailed in Germany and France were pointed out. A few instances were referred to in the practice of midwives in this city illustrating what would constitute a basis for suit for malpractice on the part of a physician; also instances in which abortion had been brought on by midwives with criminal intention, but the doctors in possession of the information could do nothing, because the evidence was not of a kind required in a court of law. A letter of this purport had been sent by Dr. Mundé.

In conclusion the author expressed the hope that the County Medical Society would take the initial step in stopping the wrong growing out of unregulated midwifery practice.

The Evil too Glaring to Require Detailed Proof.—Dr. Ayers thought this paper should have been read at least ten years ago, so that the action which it proposed might have been in effect since. It hardly seemed necessary to collect statistics to prove the evil following in the practice of ignorant midwives. Common sense must convince one that they could not do otherwise than commit most serious errors. If it were granted that absolutely ignorant women could do good obstetric work, what would be the use of doctors who practised obstetrics studying the subject at all?

If one truth stood out more prominently than others in obstetrics it was that relating to the importance of prophylaxis. The great majority of the abnormal conditions could be recognized and corrected before evil resulted. For instance, malpositions, placenta prævia, contracted pelvis, threatened eclampsia, puerperal infection—all these things, or their causes and results, could be recognized, and prevented; not, however, by ignorant women, but by men and women educated in the art and science of midwifery. There were plenty of maternities, hospitals, dispensaries, and plenty doctors able and willing to attend all cases of obstetrics, so that there was no excuse for the present faulty system.

Dr. Ayers moved that a committee of five be appointed to report at some future meeting a plan of action by which the Society could bring its influence to bear for the correction of this most outrageous situation in the practice of obstetrics.

Dr. Collyer seconded the motion and made some remarks, and the motion having been adopted, the President appointed on the committee Drs. Ayers, Baruch, Jones, Collyer, and Drayton.

Pelvic Elevation in Abdominal Surgery, and the Demonstration of a New Portable Table for Obtaining It.—Dr. H. J. Boldt read a brief paper and demonstrated the table (a report of which will appear in a future issue).

Before Dr. Boldt's arrival some discussion took place on the merits of the Trendelenburg posture, Dr. A. P. Dudley preferring the horizontal posture because he had found it satisfactory, whereas he had fears of cerebral congestion or hemorrhage, or other mischief resulting from leaving the head and body low for so long a period, but he could not say that in practice such mischief had occurred.

On the other hand, Drs. A. H. Buckmaster, J. D. Emmet, and A. F. Currier spoke with emphasis of the advantages of the Trendelenburg posture, and said Dr. Dudley's fears were quite unfounded.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 16, 1893.

D. B. St. John Roosa, M.D., President, in the Chair.

A Communication from the Ladies' Health Protective Association.—A communication, embodying a resolution with preamble, was received from this association, read, and placed on file. The resolution was: "*Resolved*, That the cremation of the city garbage and city refuse is the only safe and practical method of disposing of the same, and the Association requests the city authorities to at once consider this subject." Other bodies were requested to adopt the same resolution.

More about Dirty Streets.—A communication was read from the City Club, requesting action by the Academy, and petitioning the Mayor to remove Street Commissioner Brennan, for failure to do his duty in keeping the streets clean, and in allowing them to be obstructed by carts, etc., not in use. On motion the communication was referred to the Section on Public Health.

The Surgery of Gall-stone Obstruction.—Dr. Robert Abbe read the paper (see p. 548).

Viewed from a Medical Standpoint.—Dr. Kinnicutt said that in considering the advisability of surgical interference in gall stone obstruction, the possible terminations of obstruction of the cystic and common ducts respectively should be borne in mind. The possible terminations of chronic obstruction of the cystic duct, are, as we know, hydrops of the gall-bladder, empyema of the same, atrophy of the gall-bladder, even to the degree of its conversion practically into a fibrous band, calcification of the gall-bladder, and lastly, and fortunately very rarely, an acute phlegmonous inflammation of the same. All of these terminations had come under his notice in the past two years, with the exception of the last. The diagnosis of obstruction of the cystic rather than of the common duct being made—and in this connection he mentioned that enlargement of the gall-bladder occurs as frequently from obstruction of the cystic as of the common duct, and that the distention can be even greater—and the presence of empyema being excluded, the question remains whether nature may not be permitted to attempt a cure, in the form of atrophy or calcification. It should be borne in mind that a simple hydrops, eventually, as a rule, results in atrophy or calcification.

Dr. Kinnicutt's judgment was that surgical interference was indicated in cases of chronic obstruction of the cystic duct, if the attacks were frequent, severe, and disabling. At the same time he believed that a fairly favorable prognosis might be given in the absence of such interference.

The terminations of chronic obstruction of the common duct are so-called catarrhal cholangitis, which are characterized by jaundice, chills, intermittent fever, and often simulating a condition of sepsis, and suppurative cholangitis. In these forms no evidence of distention of the gall-bladder frequently is appreciable. The nature of the fever in catarrhal cholangitis is susceptible of different explanations. It has been variously ascribed to irritation of the ducts (fever neurotic in character), to the formation of a ferment in the ducts, and, finally, to the presence of the bacillus coli commune. This much positively can be stated, that such symptoms may exist for many months without a trace of suppuration being found in the ducts

on operation or death. In this form, recovery also can take place, and after many months of suffering. Three such cases of recovery had come under his notice in the past several years. Dr. Kinnicutt's clinical experience led him to believe that chronic obstruction of the common duct was more dangerous to life than that of the cystic duct, and that in such cases surgical interference should be strongly advised, even in the absence of disablement.

Dr. Frederick Lange related some personal experience, but said that of a single operator was still somewhat limited. One thing was certain, surgery had come to take a strong hold in this region of the body, and many lives were now saved which formerly would have been lost. Opinions varied somewhat as to certain surgical procedures, for instance, as to how far it was advisable to remove the gall-bladder. His own experience with surgery for gall stone had not been so satisfactory as in other cases, for the simple reason that he saw the cases too late. Most of them were in the condition called cholhæmia and sembling sepsis. He had twice operated for obstruction due to cancer of the pancreas with pressure upon the common duct, in one case combined with gall-stone. In one of them death took place from capillary hemorrhage in the distended gall bladder and probably in the gall-ducts of the liver. In the other case he performed entero-cholecystotomy with a good result, the patient living for a year. He had operated twice for obstruction by stone in the common duct. In one of the cases he was able, after prolonged manipulations, to press the stone into the dilated cystic duct, grasp it with the forceps, and extract it. In the other case, operated upon five years ago, he was able to inject water through the duct, and trusting to that evidence of its being free he sewed up the gall-bladder, doing so-called ideal cholecystotomy, but he afterward had occasion to regret it, for the gall-bladder burst several days later and the patient died of septicæmia. The other patient, a woman, had been subjected to the seeming septic condition mentioned by Dr. Kinnicutt for a long time. He cut down over the region of the gall-bladder, found several stones outside the gall-bladder, one in the substance of the liver, one between the gall-bladder and duodenum. There was one in the common duct which he removed by direct incision. The open treatment was practised and the patient recovered. Then he had operated in two cases where he found simple abscess and death resulted, not from the operation, but in spite of it. He had once performed laparotomy on a very large and fat woman and removed a large gall stone which had entered the intestine and caused obstruction. Peritonitis had already begun. The patient died in six hours, of collapse, although the operation had gone along smoothly and quickly. He once removed a gall-stone the size of a hen's egg; the operation went on very well, but the wound did not heal; later he detected a tumor which carried the patient away at the end of six months. He had once observed acute inflammation of the gall-bladder in a patient on whom, two months before, he had operated for large fibroid of the uterus. In this case sepsis developed, the patient had a severe chill, a swelling occurred at the gall-bladder, an incision showed bloody bile, and after two days a fibrous cast of almost the entire gall-bladder was pushed out and the patient recovered.

Dr. Lange had removed the entire gall-bladder once, for the reason that he did not think any other procedure was justified in the case. While at present opinion stood rather against extirpation of this viscus, still there was a minority of cases in which it seemed to be justified. In this instance the walls of the gall-bladder were very greatly thickened, within its walls there was an abscess which was about to burst, and so situated that it was not likely to burst toward the abdominal walls, and he therefore extirpated the gall-bladder. One case was sent him as an example of pyloric stenosis, but on operating he found this free; but there were several small gall stones which he removed after making a secondary incision parallel to the gall-bladder. The liver was not always enlarged in chronic gall stones; in a few cases it was diminished in size.

The question of whether to open the gall-bladder at once, or first sew it to the abdominal wound and wait for adhesions to form, could not, he thought, be decided dogmatically. In a case of acute inflammation of the gall-bladder, with imminent danger of sepsis, an opening should be made as soon as possible. Chronic cases, which did not involve this danger, might better be treated at another time. Opinions also differed as to the time to wait between the two steps. Some thought we should wait ten or eleven days, others would wait only two or three days.

Discretion Required.—Dr. George L. Peabody said that nobody rejoiced more than he at the invasion of the waste places of medicine by surgeons who were eager to take advantage of all the loose gaps doctors had left for so many years. The subject under discussion constituted one of the most recent medical fields which surgeons had invaded. But he could not help feeling that neither they nor physicians had yet made quite as thorough and careful a study of the field from a diagnostic and also from a prognostic point of view as would justify quite as frequent a resort to the knife as was being recommended and made. No one would doubt for a moment the brilliancy of the operations which had been detailed in the journals, nor the justification of the operations described in the paper, yet he had himself more than once been instrumental in having operations done by competent surgeons which were not justifiable because they were in error as to diagnosis. All knew that as long as gall-stones remained in the gall-bladder they were likely to do but little harm and to cause but few symptoms. He had repeatedly seen at autopsies a cured condition in these cases where neither medicine nor surgery had been resorted to; that was to say, the gall-bladder was shrivelled, atrophied, closely enveloping one or more stones, and practically removing them from the economy. When the stones got into the cystic or common duct they caused severe pain, but by the use of morphine, chloroform, if necessary, and hot baths and hot fomentations, and waiting a time, they were apt to pass along to the intestine. After a time, however, the patient was apt to suffer from jaundice, chills, intermittent fever, apparent septic symptoms. Often jaundice was the first symptom of occlusion of the common duct, in which case it was difficult to diagnose the case from one of inspissated mucus obstructing the duct, from a duodenitis, and other causes of jaundice. He once had a lady who was jaundiced for a year, due doubtless to a stone in the common duct, although she did not suffer pain; there was total disappearance of bile from the stools, while it was present in the urine and other secretions; then the jaundice gradually subsided and she completely recovered her health.

The speaker thought that in a good many suspected cases an incision was made only for exploratory purposes, but after being within the abdomen the temptation was great, if the suspected condition was not found, to search further and jeopardize the patient's chances of recovery. He had himself been guilty of this indiscretion twice when overlooking surgical operations. Where an impacted calculus existed, of course the proper thing was to remove it, but he would feel sorry if the impression went out that everybody, when in the presence of a case of chronic jaundice, should open the abdomen. It should be done only by most skilful surgeons. He had on different occasions within a year seen what was intended as an exploratory operation, not by members of the Academy, however, carried to the extent of fairly meddling with the abdominal contents and thus hastening death.

Dr. Peabody believed it was impossible sometimes to make a diagnosis between hypertrophic cirrhosis of the liver, with its attendant pain, fever, and jaundice, and obstruction of the common duct. The symptoms were the same up to a certain point. If one waited long enough, the diagnosis might be made, and the question

of operating be decided. Distention of the gall-bladder sometimes existed in considerable degree which could not be made out Only within a week a surgeon operated for him, and the gall-bladder was found greatly distended, yet it had not been made out before the operation.

Dr. B. F. Curtis thought with Dr. Peabody that one should be very careful as to diagnosis before operating; but he thought surgeons themselves had been very conservative in this field. Gall-stones constituted a condition which might not be dangerous to life, yet which made life in the particular case undesirable, unless surgery intervened. Regarding the technique of the operation, he thought the double drainage-tube, one over the other, employed by Dr. Abbe, a new and important device. Regarding the one- or two-time operation, he thought most surgeons were coming to the view that it was not necessary to do the two-time procedure. The very cases, those with acute inflammation, in which Dr. Lange recommended immediate opening, or the single operation, were the very ones in which the double operation should be done if in any at all, for it was in them we found greatest danger of purulent infection. The objection to the two-time operation was, that by the adhesion of the gall-bladder to the abdominal wall it rendered subsequent access to the stones so difficult, as happened in one of his cases, although it proved successful. The danger of sepsis was not great if on opening the gall-bladder it were well cleansed. A little staining of the peritoneum with gall had not proven injurious. He had read of another case, besides that of Dr. Lange's, in which secondary hemorrhage killed the patient, the case having been one of deep jaundice, so that this condition seemed to make the prognosis less favorable. He had himself had one case in which the patient made a good recovery from the operation, but ten days later she sat up in bed and died in syncope. Autopsy showed no apparent cause of death, which must have been due to the state of the blood. He therefore thoughr Dr. Abbe had underrated the importance of marked jaundice.

The size of the anastomotic opening, whenever one was made, was important on account of its tendency to contract, and this constituted an objection to Murphy's button. He differed from Dr. Abbe, and thought the tendency of surgery was at present to fasten the gall-bladder into the duodenum rather than into the colon, although the former procedure was the more difficult, for it seemed from certain cases that the entrance of the bile higher in the intestine was necessary to health if not to life.

Dr. C. T. Adams demonstrated Murphy's button on pieces of cloth, said that it made a linear cicatrix which was not so likely to contract as after suture, and it struck him as being a good instrument for use by men who were not expert in anastomosis by suture.

Dr. Abbe said he would hesitate to leave so large a mass in the abdomen to pass through the intestine as this button, but it had in its favor success in the cases in which it had been used. His own preference was a needle and fine silk; with it one could do quick work, which would be much more secure and much less perilous to the patient. Regarding removal of the gall-bladder, while not a grave operation, yet it was less in favor than at first. It was unnecessary, unless in cancer, or when the site of an intractable sinus, although in the latter instance a hidden gall-stone was almost always the cause and should be looked for. A fistula was to be preferred in all operations on the gall-bladder to the so-called ideal operation of sewing it up and dropping it. True, he once did the ideal operation, having passed a probe down the duct and thus proved that it was patent down to the intestine, but one could not always be assured of this. Then the fistula would heal in two or three weeks any way, unless a stone remained, in which event it would work out through the fistula. He would do the one-time, not the two-time, operation. The touch of the finger was required to tell whether one was in contact with stone; the probe would not do, especially where the stones were soft and small. It had been clearly proven that gall was innocent in contact with the peritoneum. With regard to choice between establishing anastomosis of the gall-bladder with duodenum or with the colon, few statistics were at hand, but in the three cases in which the bile had been caused to pass directly into the colon the patients had done quite well.

A House Committee Proposed.—Dr. Daniel Lewis read a proposed amendment to the by-laws, to be acted upon at the next Stated Meeting, establishing a house committee of three.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

LEPROSY IN INDIA—REPORT OF THE COMMISSION OF THE NATIONAL LEPROSY FUND — NEUROLOGY AND THERAPEUTICS—THE FOTHERGILLIAN LECTURE AT THE MEDICAL SOCIETY—EXTRA-UTERINE PREGNANCY — DEBATE AT THE OBSTETRICAL SOCIETY.

London, April 15, 1893.

Some uncalled for remarks and very inaccurate statements have been circulated respecting a little delay in the issue of the Report on Leprosy, by the commission sent to India at the instance of the Prince of Wales. The report had to be printed in India, but copies have now arrived here and a first glance shows the absurdity of the statements made by those who had not seen the document. The three commissioners appointed by the Leprosy Fund and the two royal colleges respectively, were joined by two members of the Indian medical service. The commission thus constituted spent five months in visiting various localities and asylums, and personally examining 2,313 cases. Questions were also sent to all Indian civil surgeons, through the Surgeon-general's office. The commissioners supplemented their inquiries by pathological and bacteriological investigations. I have only space and time for a few notes of results: but no doubt the report will receive close attention, and its facts and conclusions be subjected to careful criticism on both sides of the Atlantic. No connection is traced with geographical position or geological formation, or even with the density of leper population. The alleged increase of the disease in India is shown to be an error; as far as census returns go there is rather a decrease. Damp soil, famine, poverty, and insanitary conditions seem to have some connection with prevalence of the disease, and, especially so, poverty. Perhaps on this depends the greater liability of the native races; for the richer the castes the less prevalent is the disease.

"Leprosy in India cannot be considered a hereditary disease," say the commissioners, and they add that they have not evidence sufficient to establish "an inherited specific predisposition to the disease by the offspring of leprous parents to any appreciable degree." It is admitted that leprosy must be classed as a contagious disease, but the risk is so small that it may be practically disregarded. The ancient fish hypothesis, revived in our day, is rejected: so are the water and the salt hypotheses. As to treatment, the application of any oil may be palliative. Of these chaulmoogra oil has the best record, and that and arsenic are the two most valuable medical agents. In fact all others are useless.

The report gives more space than it deserves to the assertion of ignorant anti-vaccinators, that an increase of leprosy has been produced in the last thirty years through the practice of vaccination. The commissioners show that there has not been any increase of leprosy in that period, and that a number of other statements by the same parties are equally devoid of all foundation. Nevertheless we may expect that these falsehoods will be repeated by those who are interested in propagating this

fanaticism. Officials of anti-societies must make a show of earning their salt, and no doubt derive great satisfaction from Carlyle's diagnosis of the mental condition of the population to which they appeal for funds.

This week's meeting of the Medical Society of London was devoted to an address on "Neurology and Therapeutics," by Dr. Gowers, who, as I lately reported, has received from the Society the Fothergillian gold medal for his work in diseases of the nervous system. The Fothergillian medal is a prize established in honor of the founder of the Society, and has, up to the present, been awarded to the writer of the best essay on a set subject, after the manner of so many prizes. A new departure has, however, been made, and the medal is to be awarded for work already done. The Council is to propose, and the Society elect the recipient. Dr. Gowers is the first to receive the medal on the new plan; and when the Council recommended him he was at once elected by the meeting, and this address is accordingly delivered and will, no doubt, be the first of a similar series. It was sufficiently recondite for such an occasion, and future medallists will doubtless find it necessary to put forth their best efforts to reach the level set by this inaugural discourse. Dr. Gowers dwelt on the necessity of abstract work in the department he had chosen, and, indeed, in all medicine, and pointed out that practical results more rapidly follow scientific research in medicine than in other branches of knowledge. The practical applications of abstract research can be best indicated by the investigators themselves, who were therefore urged to divert from their more entrancing work sufficient effort to think out and place at the disposal of practitioners the indications to which their results point. The lecturer thought the tendency of our modern conception of disease and of health is to substitute analysis for synthesis, the particular for the general. And immense as has been the gain from this change of conception, this process of analysis is far from finished. Of course we cannot expect it to arrive at absolute completeness, but we cannot even conjecture at present how far we are from the limit of our practicable analysis. The subject was enforced by examples drawn from the functions of the brain and nerves, and their applications to disease and therapeutics, in respect to which last Dr. Gowers took an encouraging view, as his experience convinced him that great benefit may be derived and curative results achieved by systematic treatment persistently carried out.

The subject of extra-uterine pregnancy was pretty fully discussed at the last meeting of the Obstetrical Society, when three cases were related by Dr. Sinclair Stevenson, one by Dr. John Phillips, and another by Dr. Cullingworth. Dr. S. Turner commented on the fact that uterine contractions could be both felt and seen in Dr. Cullingworth's case, and mentioned another case at or near term when the placenta was believed to be made out in Douglas's pouch, but was cut into on making the abdominal incision with the result of profuse hemorrhage. He removed the fœtus and detached the placenta as rapidly as possible. Dr. Horrocks said he had usually found a history of prior sterility, and suggested that a hard mass behind the uterus with such a history should excite suspicion. He remarked that rhythmical contraction took place in the non-pregnant uterus, and in extra-uterine gestation the uterus goes on growing as much as in the normal condition, and the walls become even thicker, as they are not distended with contents. He advocated operating without waiting for the death of the fœtus, and referred to a case in which the patient was kept in the hospital for three months, according to the old practice, the result being the death of the woman on the table, as she had fallen into a collapsed condition. In a subsequent case he operated at once and easily removed the fœtus, but the placenta was adherent and the hemorrhage profuse, and only controlled by ligaturing the broad ligament in sections. Nevertheless the woman made a good recovery after the operation, which had lasted three hours.

He referred to two other cases, one in which he had removed both placenta and fœtus; the other under Dr. Galatin, in which the placenta was left to come away piecemeal. Dr. Duncan thought modern methods had reduced the risk of removing the placenta, but he would not meddle with it unless its circulation had undergone the usual diminution. He would not postpone operating until term, but in a case coming under care at six months, thought it might be well to postpone interference to obtain a visible fœtus. He mentioned a case in which the placenta was left, and hemorrhage was caused the next day in washing out the sac, probably from partial detachment, and he disapproved of aspiration through the drainage-tube. Dr. Herman thought it desirable to operate at once in a case diagnosed in the first three months. It was quite a different thing lately—say in the last two months—which cases he classified as when: 1. The child being dead, the placenta is thrombosed and even partially detached. 2. The placenta is attached to the broad ligament when the sac can be ligatured, as for ovarian pedicle. 3. The placenta attachments being very extensive, removal must not be thought of. He said it was not necessary in every case to suture the sac to the abdominal wound. He once cleared out the sac and stuffed it with iodoform gauze, which was quite sweet when removed ten days later. Dr. Donald once met with great hemorrhage through disturbing the placenta in searching for the fœtus when the intestines were all matted together. Dr. Boxall said the size of the fœtus was not a guide to the duration of the pregnancy, as the circumstances which led to its death interfered with normal growth. Dr. Cullingworth said, when possible, the sac should be removed in its entirety, and, failing that, as much as possible should be removed. He was under the impression that the uterus did not grow beyond the third or fourth month. Whenever the placenta was accessible, it should be removed; but when so placed that the source of hemorrhage could not be got at, although reluctant to leave it, he saw no other course. In the early stages he was for immediate operation, but later on each case must be considered by itself. He did not attach importance to the life of the fœtus, for it was generally unfit for existence. He disapproved suturing the sac to the abdominal wall, and regarded as nonsense the talk about shutting it off from the general peritoneal cavity.

THE MEDICAL ASPECTS OF THE WORLD'S FAIR.

(From our Special Chicago Correspondent.)

CHICAGO, May 2, 1893.

THE opening of the World's Fair during the past week has brought prominently to the front the discussion of the many sanitary questions pertaining to it. The city authorities and the managers of the Fair itself will have presented to them some of the problems connected with the sanitary caring of large crowds which will doubtless call forth their best-directed efforts and surprise them with an entirely new experience. Prospectively, nothing would appear to be desired in the forethought for possible emergencies, as is shown in the excellent police regulations and the sanitary arrangements for what is now a village by itself. With miles of walks outside and inside of buildings, with galleries covering acres of space, with accommodations for feeding fifty thousand people, with multiple means of transportation to and through the grounds, there is everything to make it a little city by itself, through which will course all the energetic purposes and stirring bustle of constantly interchanging activity.

Of course, under such circumstances the care of those who may become weak and fall by the way, or who may become the subjects of accidents, must be duly considered. To this end the Exposition Hospital has been established, with a branch in the Woman's Buildings. The hospital is supplied for every emergency, and has a well arranged ambulance system and a full corps of nurses. Even such as may desire women physicians can be treated to order

at the Woman's Pavilion. In fact even babes are temporarily cared for in the nursery, and can be checked as any other ordinary piece of baggage.

It would appear that the medical director of the Exposition and his staff, aside from caring for the usual accidents which are associated with crowds, must be prepared for a large number of cases of exhaustion and prostration from extraordinary efforts at sight-seeing and its associated requirements. Many of the visitors, especially strangers in the city, will be uncomfortably housed, improperly fed, and be subjected to the sudden changes in climate which will have a telling effect upon such as are of lowered vitality or physically weakened by previous sickness. With such an extra day's fatiguing tramp may make them subjects for the ambulance call and a temporary bracing up in the hospital ward. In fact, on the opening day there were thirty such admissions to the Emergency Hospital.

The scare in reference to the Chicago drinking-water, founded, I am warranted in saying, more on theoretical than practical knowledge, will doubtless cause great trouble to all save the venders of artificial waters and the hotel proprietors, who largely advertise the filtered and boiled drinkable. But water, like purity of character with which it is so often compared, cannot be expected to be absolutely so, notwithstanding our wishes to that end. In fact, we are not sure that the purest water is always the best, any more than is that insipidity of character which is too negative even to provoke criticism. We need not cheat water of its taste because it is water. The Chicagoans have lived and thriven on this dreadful drink for years, in spite of the sensational reports by *The Lancet* commission. And after all, there is a grim comfort in knowing that the water here, bad as it is made to appear, is by the admission of these experts better even than that supplied to London. There is, of course, no excuse for the stock-yard drainage, or for other sources of pollution, especially in the face of the fact that they can be easily remedied; but it must be understood that the main supply from the lake is as free as possible from injurious contamination. Simple filtration is all that is required, unless pathogenic germs are actually present. But your correspondent holds that there will not be so much danger from drinking-water as in over-crowding and bad living, and over-exertion among the floating population of sight-seers. But we shall see what we shall see.

As I have already said, the medical appointments of the Exposition are such as will probably meet all requirements, but their actual working capacity has to be proven.

To the medical man visiting the fair there will be much that will be interesting, even outside of the strictly medical exhibits. The application of the inventions in other lines will tend to develop discoveries and offer suggestions for improvement in his own work. Notably among such will be the utilization of many of the ingenious electrical contrivances, and mechanical appliances and conveniences which may make his daily labor easier and lessen the friction of his dreary drudgery. No opportunity has as yet offered itself to analyze this part of the Exposition, but from time to time it is to be hoped that your correspondent can bring before the many and distant readers of the RECORD such data in the medical and surgical lines as will interest and edify them.

Using the fair as a medium for advertising, there is of course the usual trickery of flashy display and the cheating effrontery of quackery in many of the medical exhibits, but these cannot and will not receive notice. We shall endeavor, however, to take the reader in our confidence and visit the fair for him, and if possible have him look with impartial eye upon such objects and conditions as may be of practical interest to him. Thus much, then, for a general introduction to our Chicago letters.

Urticaria.—Sodium salicylate, in doses of three grains every two hours, is said to be very efficacious in relieving urticaria. Three or four doses usually suffice for a cure of the most obstinate case.

REGULATING THE DOSAGE OF SPRAYS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: It is desirable in spraying cocaine solutions or other fluids of exact dosage, to have an atomizer so arranged that it will spray a measured small quantity from one drop upward of such fluids.

I should like to refer to a simple device of my own, which anyone can make in a few minutes, and which can be attached to any of the ordinary sprays in use.

I cut off a small test-tube with a file, leaving it about one inch in length. Then I cut a small piece of pure rubber one-eighth inch thick, square in shape, to snugly fit the interior of the test-tube and yet leave space for air to enter. This piece of rubber I perforate in the middle and slip on to the stem which descends into the bottle of the atomizer. Then I slip the test-tube over the stem until the stem reaches the bottom. The rubber slides into the test-tube and holds it in place. I can spray all of a single or more drops of fluid when they are placed in the test-tube and the atomizer bottle has been screwed back in place.

Respectfully,
O. T. FREER, M.D.

DETERMINATION OF THE SEX.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In Numbers 7 and 15 of the present volume of the MEDICAL RECORD is competently advocated the hypothesis that sons result from ante-menstrual conceptions and daughters from conceptions occurring after menstruation.

A law of the Jewish religion proscribes coition during the two weeks following the first day of each menstrual period. This law is obeyed by Orthodox Jews, and beyond a doubt has been generally respected during the past centuries of Hebrew history. But there are Jewesses, and they are not disproportionately few.

One question remains. Does the peculiar vigor of the Hebrew race depend in any measure on its peculiar method of perpetuation by ante-menstrual coition?

ALBERT C. STANARD, M.D.
108 WEST THIRTY-FOURTH STREET.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 29, 1893.

	Cases.	Deaths.
Typhus fever	14	4
Typhoid fever	20	10
Scarlet fever	162	19
Cerebro-spinal meningitis	15	16
Measles	151	5
Diphtheria	97	36
Small-pox	6	3
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

Decoction of Lemons in Malaria.—Tommasi-Crudeli has recently called attention again to this remedy, which enjoys great popular repute in Greece, Italy, the West Indies, and other especially malarious regions. It is simply a decoction of the entire lemon, seed and pulp. He does not put any faith in the alleged virtues of eucalyptus or of the salicylates in the treatment of malarial affections.

Alopecia Areata is treated by Dr. Motz by means of hypodermic injections of five drops of a 1 to 408 solution of corrosive sublimate.

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Original Articles.

SYMPHYSEOTOMY FOR LABOR RENDERED IMPOSSIBLE BY FLAT RACHITIC PELVIS.

BY EDWARD P. DAVIS, M.D.,

PROFESSOR OF OBSTETRICS AND DISEASES OF INFANCY IN THE PHILADELPHIA POLYCLINIC; CLINICAL PROFESSOR OF PEDIATRICS IN THE WOMAN'S MEDICAL COLLEGE OF PHILADELPHIA; CLINICAL LECTURER ON OBSTETRICS AND GYNECOLOGY IN THE JEFFERSON MEDICAL COLLEGE; VISITING OBSTETRICIAN TO THE PHILADELPHIA HOSPITAL, ETC.

THE following case of symphyseotomy throws light upon several points of interest in the study of the operation. At present all cases of symphyseotomy accurately reported are of value in forming a basis for judgment concerning the operation.

The patient, a multigravida, applied for admission to the Maternity Department of the Jefferson College Hospital during the month of February, 1893, and was told that she would be received. She was prevented from entering the Maternity by others of her family, who kept her at home to continue her household duties. She gave a history of having been twice married; the present was her fourth pregnancy; one child had been stillborn after the use of forceps; two others were living. Nothing more was heard from the patient until the night of March 8th, when one of the physicians to the Maternity was summoned to her dwelling to attend her. She was found in a tenement, scantily clad, her surroundings giving evidence of abject poverty: she had been in labor the entire day, and her pains had been excessively strong. They were gradually ceasing when the physician arrived, and she was making no progress. On examination the back of the child was directed toward the left side of the mother's abdomen. Fœtal heart sounds were plainly heard over the left side of the mother's abdomen, between the umbilicus and the anterior superior spine of the ilium. The head had not descended through the brim of the pelvis, but could be distinctly outlined by palpation. On vaginal examination, the head was found transversely at the brim of the pelvis, the left parietal bone against the promontory of the sacrum. The membranes were unruptured. External pelvimetry gave the distance between the anterior superior spines of the ilia, 28 ctm.; between the highest points of the crests of the ilia, 28 ctm.; the external conjugate, Baudelocque's, 18 ctm.; the internal conjugate, or conjugata vera, was estimated at 8.5 ctm. As it was evident that spontaneous delivery was not likely to occur, I was summoned to the case. In addition to what has been described, I found by internal measurement the internal conjugate to be 8 ctm. A radical operation seemed demanded, and after consultation with Dr. E. E. Montgomery, symphyseotomy was decided upon. It was difficult to persuade the patient and her friends to leave her dwelling, where the conditions for performing an operation were most unfavorable. She was finally placed in a cab and taken to the Maternity Department of the Jefferson Hospital, where symphyseotomy was performed as soon as the patient could be cleansed and the surface of the abdomen and vagina antisepticized. Under ether anæsthesia a supra-pubic incision was made, sufficient to give access to the joint. A vein as large as a lead-pencil, just above the symphysis, required ligation in two places; there was no considerable hemorrhage. The symphysis was found to be of extraordinary height, and the Galbiati knife was passed around the joint with considerable difficulty. It was finally brought to engage at the lower extremity of the joint, and the effort was then made to carry the knife upward and forward; this effort was attended with marked difficulty, as the joint did not seem cartilaginous in character, while the line of the articulation was far from being a straight line. The knife was finally carried through the articulation, the bladder and urethra having been avoided under the guidance of a sound passed before the joint was severed. The abdominal incision was then tamponed with gauze, the patient brought to the end of the bed, when, upon vaginal examination, it was found that the head then occupied the right oblique diameter of the pelvic brim. The Tarnier forceps was applied to the sides of the child's head, and the delivery of the infant readily accomplished. It was slightly asphyxiated, but revived. Upon the left parietal bone, over an area somewhat larger than a silver dollar, the tissues of the scalp were bruised and discolored where the head had been driven against the promontory of the sacrum during the patient's ineffectual labor. The measurements of the child's head were as follows: Maximum diameter, 14 ctm.; occipito-mental diameter, 13.5 ctm.; sub-occipito-bregmatic diameter, 10 ctm.; fronto-mental diameter, 9 ctm.; bi-parietal diameter, 9 ctm.

It will be seen that the head was fully developed, and exceeded considerably in size the inlet of the mother's pelvis. The placenta was expressed, and the uterus thoroughly douched with creolin mixture. A moderate tampon of iodoform gauze was placed within the uterus and vagina. After the symphyseotomy the patient's pelvis had been supported by lateral pressure at the hands of assistants. After delivery, the abdominal incision was closed at its upper two-thirds by interrupted silk sutures. As oozing of serum was present from the tissues about the symphysis, the lower third of the incision was lightly tamponed with gauze. A strong binder was then fastened firmly around the patient's hips, and a pad placed above and behind the uterus. The patient reacted well from the operation, and although somewhat exhausted, took liquid food and stimulants at intervals. She manifested, however, from the first, an intermittent, restless cough, and a nervous and excitable condition, which was not regarded favorably. The gauze was removed from the uterus and the uterus douched with creolin mixture the morning after the operation. A broad strip of adhesive plaster was passed around the pelvis, and a binder with straps and buckles was gradually substituted for a strongly pinned obstetric binder. It was learned that the patient had not had a proper movement of the bowels for two weeks before admission, and efforts were made to empty the intestine. In forty-eight hours from the operation the patient's temperature and pulse rose, her cough increased, and her restlessness was decided. No bowel movement had occurred. Active delirium supervened, with rapid respiration and increased cough. Impaction and intussusception of the intestine were feared from the symptoms which developed. The patient died seventy-two hours after delivery.

A post-mortem examination was obtained with difficulty, it being impossible to open the cranium. Especial interest attached to the symphysis pubis, the height of which was found to be three inches. The joint surfaces resembled a rude letter S. But little cartilaginous tissue had been present in the joint, and almost complete ossification with rachitic bony material existed. It had been impossible to follow the line of the joints with the symphyseotomy knife, and at the upper portion of the surfaces it had deflected to the right of the

median line. The bladder and urethra were uninjured. The surfaces of the symphysis were glazed over, although callus had not been produced. No evidence of septic infection existed. In addition to a careful macroscopic examination of the tissues about the symphysis pubis, Dr. D. B. Kyle, of the pathological staff of the Jefferson College, made culture experiments with material taken from the vicinity of the joint; no bacteria could be detected by such examination. The lungs presented a well-marked example of pneumonia of the type commonly seen in alcoholics. The apices of both lungs were enormously engorged. The uterus, tubes, and ovaries were normal. The intestine showed the effects upon an impacted colon of prolonged labor. A portion of the wall of the intestine had been subjected to long-continued pressure with hardened fæces, and also to the pressure of the uterus, which forced the intestine against the side of the pelvis and produced a condition closely resembling that of beginning gangrene. No evidence of intussusception was present, but in the opinion of the pathologist such a condition might readily have disappeared when the intestines were emptied post mortem. At the upper portion of the abdominal cavity there was a beginning non-purulent peritonitis secondary to the pneumonia. As regards the pelvis, no injury to the sacro-iliac joint could be detected, nor were there evidences of septic infection about the symphysis, or the tissues through which the incision had been carried. As favoring the occurrence of pneumonia at the time, the temperature on the day of the patient's labor ranged from 32½° F. to 57½° F., and a heavy rain added to unfavorable conditions present.

This case offers several points of practical interest. First may be noted the good result, so far as the child is concerned, from retaining the membranes unbroken, and from the method of delivery employed. Had the membranes been ruptured early in the case, the child must undoubtedly have perished. As it is, the child has grown and developed normally, and is a good specimen of a healthy baby.

As regards the mother's pelvis, it is a good example of the flat, rachitic pelvis in which the rachitis had healed some years previous to her labor. The abnormal height of the pubic joint must be attributed to the tendency which rachitic bone shows to deposit an abundance of ill-developed, bony tissue during the stage of healing. Attention has been recently drawn, in a report upon symphyseotomy from the Dresden clinic, to the fact that the symphysis pubis is rarely a symmetrical joint; such deflection as we have described, although in lesser degree, is not uncommonly observed, and must complicate the performance of symphyseotomy. Our own preference would be for the use of the surgical chain-saw in severing the pubic joint. This has been already employed for this purpose, and passed around the joint at its inferior extremity can be brought upward between the surfaces without injuring the mother's tissues. Such an instrument would not be embarrassed by deflections in the line of the joint.

The interesting condition of the intestine illustrates an extreme case of the ordinary constipation of pregnancy, and draws attention to the necessity for emptying the bowel of the pregnant patient as thoroughly as possible before or during her labor.

The occurrence of pneumonia under the conditions present is not an infrequent complication following surgical operations of various sorts. In the absence of septic infection the pneumonia cannot be ascribed to septic poison, and must be looked upon as one of the complications which the surgeon must fear in all operative cases placed under unfavorable conditions, and a complication against which he can guard with the greatest difficulty. Occurrence of the pneumonia after symphyseotomy can in no way militate against symphyseotomy as an operation. It is especially desirable that all cases of this operation be reported, and particularly those in which any light can be thrown upon the difficulties which the operator may meet during the operation, as well as in the after-results and complications.

AN EXPERIMENTAL STUDY OF THE SEAT OF CUTANEOUS SENSATIONS.

By CHARLES L. DANA, A.M., M.D.,

NEW YORK.

The following case furnishes, as it seems to me, a demonstration of the fact that cutaneous and muscular sensations are closely connected, if not absolutely identified, in point of localization with the motor centres. There has been for some years a controversy as to the exact part of the brain cortex in which the centres for touch and pain and muscle sense are represented. In a paper written by myself some years ago, entitled: "The Cortical Localization of Cutaneous Sensations," I collected the evidence up to date bearing on this subject, and it seemed to me that there was but one inference which could be logically drawn, and that was that the centre for the sensations derived from the skin was practically identical with the motor areas of the brain. This view is the one which seems to be generally accepted in France, in Germany, and in Italy, and by most neurologists in this country. Dr. Ferrier, however, and some other English neurologists dispute this view and assert that the tactile sense has a special centre which is probably in the gyrus fornicatus. So far there has been in my opinion absolutely no clinical evidence to support this, although two cases which allege to do so have been reported. The evidence so far is based upon experiments upon monkeys. On the other hand, there has been an increasing weight of clinical and pathological testimony in support of the view which I have maintained. It has been my purpose some time to present this evidence, a great deal of which I have collected and some of which seems practically demonstrative. At the present time, however, I wish only to report an experiment which, as I have already stated, seems to be of great value in connection with this discussion and also to have an independent importance to psychologists

History of the Case and the Experiment.—The patient is a man aged thirty-six, born in New Jersey, and suffering from hereditary chorea. He was sent to my clinic nearly a year ago by Dr. George R. Elliott. At present I shall only say of it that the hereditary feature of this chorea is most extraordinary. The patient now represents the fifth generation in which this disease has developed between the thirtieth and fortieth year. It has been transmitted through the maternal side in all cases. From generation to generation a certain number of children have begun, after they reached the age of thirty, to develop choreic movements, mental deterioration, and finally to become insane and demented. My patient began to show disturbances of voluntary movement and peculiarities in articulation and temper about three years ago. The disease progressed, and in the spring of 1892 he was admitted to my service in Bellevue Hospital. After about a month, with his own consent and that of his father, he was trephined and a piece of skull measuring two by three inches was removed from the right convexity at a point over the middle part of the precentral convolution and the parts in front. The operation was done simply as a last resort and because such operations had been reported to be of temporary benefit, at least, in cases of general paresis, to which hereditary chorea bears some resemblances. The patient was unquestionably improved in many ways for three or four months after the operation, but eventually he became as bad as he was on entering the hospital. It occurred to me that I might utilize the opening in his skull for purposes of experimentation, acting, of course, with his own consent and knowledge. With this consent and having explained to him the nature of the operation I was intending to do, the experiment was begun.

The patient's scalp was shaved and the motor areas were marked out upon it. Cocaine was injected beneath the skin where it was intended to introduce the instrument. A brain electrode consisting of two long sharp insulated needles, each connected with the cord of a

faradic battery, was then driven straight down through the scalp and into the dura mater for a distance of about half an inch. The point selected was just over the shoulder and arm centre. The electric current was then

turned on. After a little manipulation there was suddenly a quick convulsive movement of the left arm and shoulder, the forearm being flexed and the whole arm raised and drawn back a little. There was also a slight movement in the left foot and a little twitching in the left side of the face. The electrode was immediately withdrawn and the patient was questioned as to his sensations. He said that at the time of the movement of the arm he felt in it a numbness and heaviness, and otherwise described the feeling as though it were much the sort of sensation produced by pressure upon the nerve. The sensation came with the movement and disappeared with it. There was no pain either in the head or scalp, nor was there any pain referred to the extremities. The electrode was again introduced and the experiment was repeated. This time, with a stronger current, on making the connections the movements of the left arm, leg, and face occurred with much more violence. There were, in addition, twitching movements of the eyes. The convulsion affected slightly also the right side and there was a temporary loss of consciousness. On coming out of this the patient gave very much the same account of himself as before. He had felt a sudden numbness in the left arm and shoulder, and his description refers the sensations to that part alone, although the movement involved the whole of the left side. This feeling he could only describe again as being one of numbness or heaviness or prickling or thrilling in the moving part. Again he experienced no pain, either peripherally or locally.

This experiment, it seems to me, demonstrates beyond any doubt that there is a sensory correlative to the motor cause and that the seat of this is in the motor part of the brain cortex. The sensation which we describe as paræsthesia or numbness is practically the same as that which is produced by a diffuse stimulation of the tactile nerves of the skin. If, for example, the whole forearm and hand were gently rubbed by a layer of cotton, the sensation produced would be considered subjectively that of a feeling of numbness or formication and this is what was produced by stimulating the cortex in this man's case; in other words, the same feeling was produced in the arm by stimulating the cortex as would be produced if the arm itself were diffusely stimulated by something that would call out tactile sensations. The further psychology of this experiment I leave for the experts to work out. In Dr. David Ferrier's last work on cerebral localization he not only ignored a considerable part of the weighty evidence in favor of the localization of sensation in the motor areas, but did not deign to refer to some of those gentlemen who assiduously worked at this branch of investigation. I trust he will be more generous in the future. Certainly the evidence of a sensory function to the so-called motor cortex is too strong now to be treated slightingly by any one.

*Genealogy of a Case of Hereditary Chorea.**

I. MOTHER, b. Scotland, d. of *chorea*.

II. MRS. H., b. Scotland, d., New Jersey, of *chorea*.

III. MRS. P. | MRS. VAN B., d. of *chorea*. | Sister, healthy. | Sister, healthy. | Brother, healthy; d. at sea. | Brother, healthy; d. at sea.

IV. ELDER SISTER, d. 46; began, 30. | YOUNGER SISTER, d. 40. | MRS. C. 28–43. | YOUNGER BROTHER, 25–40. | Daughter, m.; d. of heart disease, 45.

V. Son, d. of gastritis, 23. | Son, 20, well. | JOHN, *patient* 36. | Daughter, m., 33. | Daughter, s., 23; phthisis. | Daughter, m., 24; well. | Three children, healthy.

Two children.

* The persons in small caps were those who had chorea.

30 WEST FORTY-SIXTH STREET, March 31, 1893.

The Museum of the Hôpital St. Louis, in Paris, contains, says Dr. Dawson in the *Montreal Medical Journal*, an unrivalled collection of wax models, representing in a very life-like manner some of the many specially interesting cases which have been here studied and treated. Of these there are at present about 2,000 specimens, arranged and catalogued, and this number is being added to from time to time. Some of those recently executed by Mr. Barretta reproduce with marvellous accuracy the pathological conditions which they represent.

A Long-lived Family.—A family of five brothers and two sisters, whose united ages amount to five hundred and forty-nine years, an average of 78.3 years each, are living, all in excellent health, in St. Ives, England.

Black Eye.—There is nothing to compare with a tincture or a strong infusion of capsicum annuum, mixed with an equal bulk of mucilage or gum arabic, and with the addition of a few drops of glycerine. This should be painted all over the bruised surface with a camel's hair pencil, and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, the treatment will invariably prevent the blackening of the abused tissue. The same remedy has no equal in rheumatic, sore, or stiff neck.—*Medical Times*.

Balsam of Copaiba is advised as a local application, in the form of urethral injections, for the cure of gonorrhœa.

PELVIC ELEVATION IN ABDOMINAL SURGERY, WITH A NEW TRANSPORTABLE TABLE FOR OBTAINING THIS POSTURE.[1]

By H. J. BOLDT, M.D.,

PROFESSOR OF DISEASES OF WOMEN IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL; GYNECOLOGIST TO ST. MARK'S HOSPITAL AND THE GERMAN POLIKLINIK; CONSULTING GYNECOLOGIST TO BETH ISRAEL HOSPITAL.

PELVIC elevation in abdominal surgery is a greater advance toward the saving of life than the introduction of drainage of the abdominal cavity. Although this statement will doubtless meet with opposition from not a few sources, yet I am personally so convinced of the correctness thereof that I have no hesitation in making the above assertion, and have no doubt but what eventually it will generally be accepted as correct.

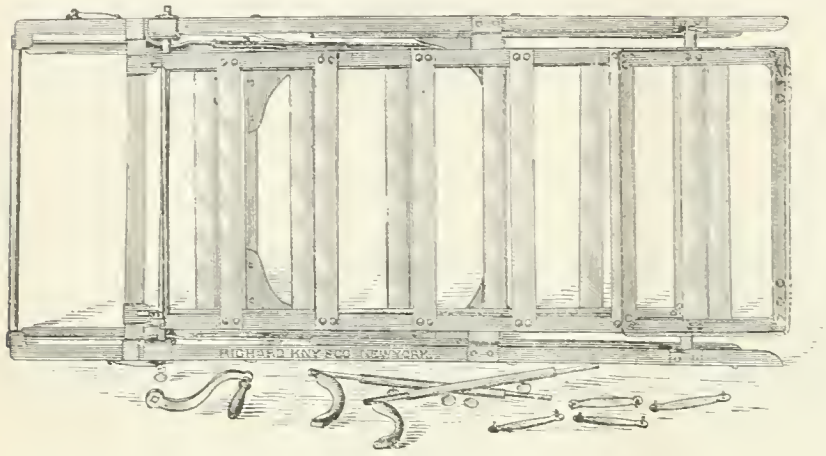

FIG. 1.—Table Folded Up.

My reasons for taking this stand are that we see everything which we do in the abdomen, there is not an adhesion severed, not a ligature placed, not a scissor cut made without the aid of sight. The intestines are always left within the abdominal cavity during operation; which is of importance in lessening the danger of intestinal paralysis, which does occur occasionally when eventration is resorted to.

I do not share the views of operators who look upon this posture with contempt, and say that the good surgeon can discard it and work equally well with the sense of touch. It seems to me that the conscientious surgeon should make use of every advantage offered which is of interest to the patient. By being able to see our work we avoid injury of the intestines or of the ureters; we can place a ligature more exactly; we see the source of existing hemorrhage and its nature, consequently we are better able to deal with it intelligently; we can more readily avoid rupture of a pus-sac of any kind during enucleation, and can place napkins or sponges in such manner as to catch the pus in the event of a rupture, thus avoiding infection of the peritoneal cavity. Flushing the abdominal cavity and draining it in case that pus accidentally escapes into it, is certainly not as safe as to avoid contamination altogether.

It is now nearly five years since I began to use pelvic elevation in hospital and in private practice for some difficult abdominal operations, hence it must be conceded that my recommendations are based upon sufficient experience. I had a wooden frame made at that time, to place and fasten upon an ordinary operating-table, which had the shape of the portable steel band frame which Dr. Krug recently had constructed. The contrivance, however, was too bulky; the patient could not be changed in position without considerable trouble and delay, and it has the same objection which is found in all other tables, and also in the movable portable frame alluded to, namely, that the circulation in the vessels of the neck is impeded during the pelvic elevation.

I have since thought about contriving an operating-table for the same purpose which should have the advantage of easy transportation and simplicity of management during operation. I think that my object has been achieved in the table presented. The idea of making it from steel bands has been derived from the table constructed by Dr. Foerster.

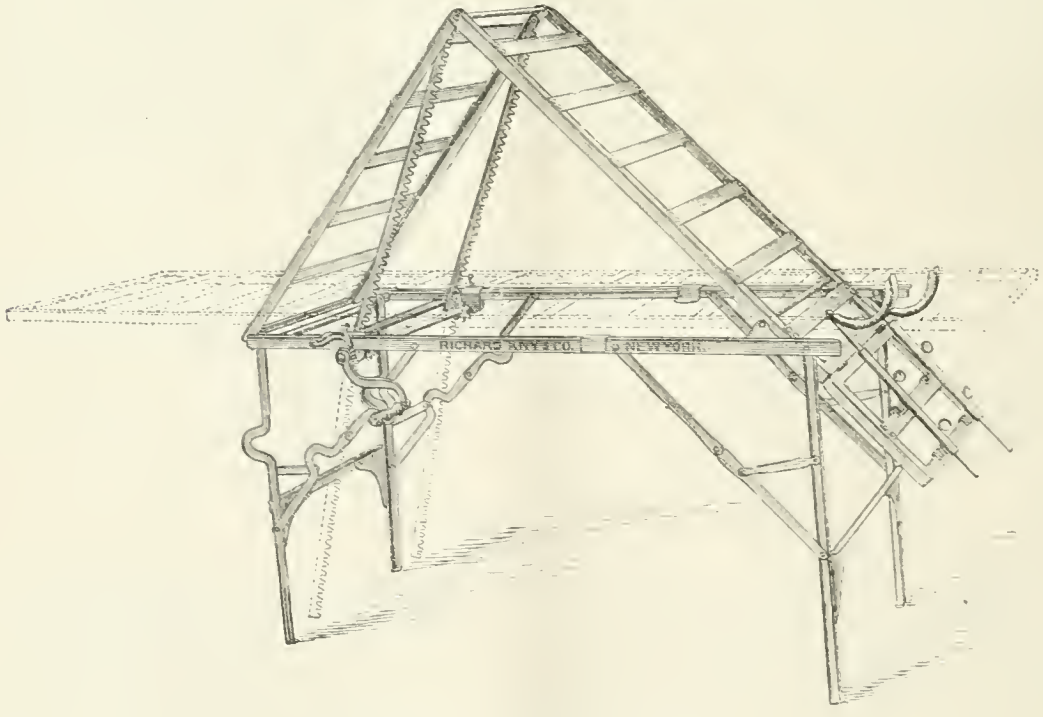

FIG. 2.—Table when Elevated and Horizontal.

I beg here to tender my thanks to Richard Kny & Co. for their generosity in having had several models constructed for me.

The advantages of my table are manifold: It is very easy to transport on account of the small amount of

[1] Read before the County Medical Society, April 27, 1893.

space which it occupies (see Fig. 1); its light weight, forty pounds when of steel, and about sixty pounds when of wrought iron: it can be conveniently carried under the arm from place to place, and be put in a corner when not in use; the space it occupies is two and a half inches in thickness, twenty inches in width, three feet in length: but the main features upon which I lay stress are that the operator can, without the assistance of anyone, elevate the pelvis to any desired height, by means of the handle, which is protected at such time with a sterilized towel; the lowering of the table is obtained in the same manner. A catch on the cogwheel prevents the possibility of the table slipping back from the height to which it has been elevated, and when it is desired to lower the table it is only necessary to throw the catch off the cogwheel (see Fig. 2). Another movable catch at the foot of the table prevents the possibility of it being accidentally raised too high. The handle is reversible to either side, so that in case the operator prefers to have an assistant on the other side attend to the raising and lowering of the table, it can be done.

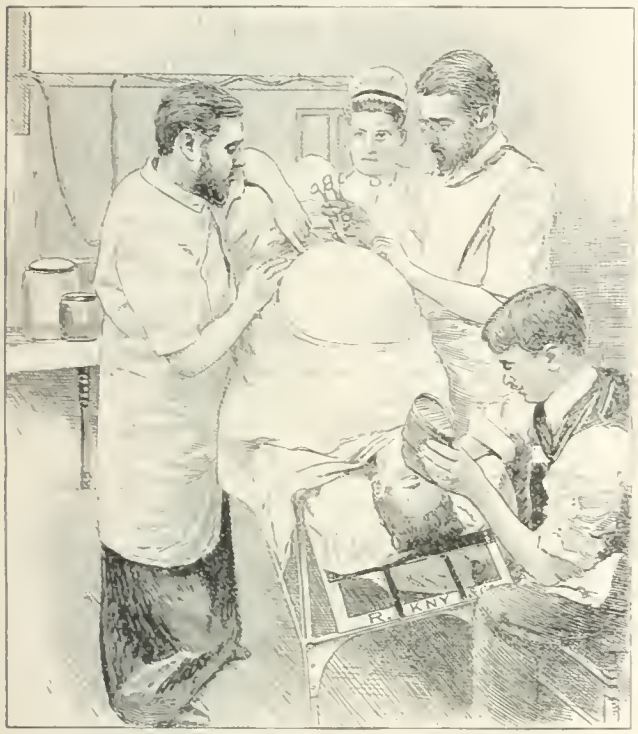

FIG. 3.—Table when in Use, Showing Even Plane Between Trunk, Neck, and Head.

The vessels of the neck are not distorted when the pelvis is elevated (see Fig. 3), as is the case with all other tables and contrivances, with the exception of the Trendelenburg chair; thus pelvic elevation on this table permits unimpeded circulation through them, an advantage which should be obvious. The patient cannot slip down, owing to the support afforded by the movable shoulder-braces, which are padded and can be set for any patient, whether tall or short, corpulent or slender.

The anæsthesia with the patient in such position, *i.e.*, without any interference with the circulation by distortion of the vessels of the neck, is much smoother and I dare say, safer, whether ether or chloroform is used. Another advantage is offered by this table, even if the pelvic elevation is not intended to be used during operation, viz.: if from the administration of the anæsthetic a condition results which would make it desirable to obtain temporary cerebral congestion, this can be accomplished most perfectly in a moment, without taxing the physique of anyone, and also without necessitating a disarrangement of the sterilized or antiseptic coverings surrounding the field of operation.

There is another and final advantage which I wish to have considered in the employment of this table when extreme pelvic elevation has been employed during an operation. It is not without danger to have the patient placed too suddenly in a horizontal position, it may cause serious syncope from the too rapid disturbance in the equilibrium of cerebral circulation; but on this table this can be avoided with the greatest ease and without exertion, the patient can be let down very gradually and the lowering stopped inch by inch if desired.

A large, heavy rubber pad, covering the table and thus obviating the pressure effects caused by the steel bands, is supplied if desired, or the operator can cover the table with a woollen blanket and cover this with a rubber sheet or a Kelly pad, if he desires or anticipates to flush the abdominal cavity. A contrivance is made to attach to the bottom of the table to catch the water in case flushing is resorted to, if this is preferred by the operator: but, as noted previously, I believe that when operations are done with the employment of the pelvic elevation it will seldom be necessary to resort to such recourse. The heavy rubber and the water receiver are independent of the table, and left to the taste of each operator.

The credit of bringing pelvic elevation into more general use for the application of pelvic and abdominal surgery belongs to Dr. Willy Meyer, who also termed this posture Trendelenburg's posture, because in Professor Trendelenburg's clinic Meyer saw and learned the value of this position. Yet I must here enter a very strong protest against the adoption of this term, for obvious reasons. We have already too many terms in medicine to which is attached the name of the particular person who first described the respective disease or symptom or operation, so that I am certain that not a single physician can give a definition of all. It is certainly not my intention to endeavor to impair the honor justly due our brilliant *confrères* for their ability and their discovery, and any writer can give them such honor and credit in his work, even if a few words more are requisite. I, for one, fully recognize the credit and honor due Professor Trendelenburg for having made generally known, through Professor Meyer, the advantages of pelvic elevation; but the compound word "Trendelenburg posture" does not convey to everybody what is meant any more than, for instance, Fehling's operation (removal of the ovaries for the cure of osteomalacia), or Schnecking's operation (vaginal fixation of the mobile retroposed uterus). I sincerely hope that writers will be more definite, so that not only the specialists in their respective line will understand what they mean by a respective term, but that every physician may be able to comprehend what they mean without looking over books for reference, perhaps in vain.

As already noted, pelvic elevation, as recommended by Trendelenburg, became generally known to the profession through Dr. Meyer, in 1884, in Langenbeck's "Archives," vol. xxxi., in which article Meyer recommends it not only for supra-pubic cystotomy, for uretero-vaginal fistula, but also for all laparotomies coming in the domain of the gynecologist if the pathological condition is located in the small pelvis; and it is particularly in this class of cases in which the gynecologist finds it of such great advantage. This, of course, includes laparo-hysterectomies, whether done for cancer or for fibro-myomata, because the actual operative work is done in the small pelvis. Since the first article written by Meyer he has made several contributions, and others have corroborated the correctness of the advantages Meyer has elucidated for pelvic elevation. Mendes de Leon and Veit, of Berlin, were the first among the gynecologists to actively take notice of Meyer's publication. However, long before this position was recognized, over twenty years ago, our justly esteemed colleague, Dr. Emil Noeggerath used this same posture in nearly every difficult abdominal operation; but Noeggerath, with his great modesty, did not consider his work of sufficient importance to call the attention of the profession to it, and the entire honor, therefore, belongs to Meyer, it being recognized that not to him who first applies a remedy the credit be-

longs, but to him who makes it known to the profession in print, so that all can avail themselves of the suggestion made.

I do not, however, sanction the employment of pelvic elevation in all cases of abdominal surgery, because it is necessary to make an incision double and treble the length to utilize the benefit of the posture than one needs without it; but what I do say is that we ought to use a table of some description by means of which we can get pelvic elevation at once, without inconvenience, should circumstances demand it. It is claimed that it makes no difference how long an abdominal incision is made, yet I believe if an abdominal operation was to be performed on any of us, we would prefer to have the cut as short as the safety of the operation will permit.

51 West Fifty-second Street.

SOME POINTS UPON MALIGNANT DISEASE OF THE NOSE.[1]

By HENRY B. DOUGLASS, M.D.,

pathologist manhattan eye and ear hospital, throat department.

American pathologists of renown describe fifteen varieties of tumors which are known as a pure type and several other varieties, the number varying with the descriptive powers of the individual investigator, of so-called mixed tumors.

Eight varieties of these tumors greet the nasal specialist in his work, puzzle his brain, and receive his closest attention. These nasal tumors are of the character of tumors originating in and upon mucous surfaces in general, with exceptionally one springing from the bony parts. Commonly we meet polyps, mucoid and fibrous, osteoma, sarcoma, and carcinoma. Less frequently adenoma, papilloma, neuroma, and cystic tumors claim our attention. These eight varieties, all that may occur as tumors in the nasal tract, are easily treated with the exception of two, which we call malignant tumors, sarcoma, and carcinoma; and polyps, osteoma, and adenoma, which have an unfortunate tendency to degenerate or take upon themselves a malignant character, rapidly assume tremendous importance from the diagnostic and prognostic standpoint.

Certain varieties of tumors remain to the nose specialist an entirely unknown quantity. One never hears of endothelioma, lipoma, chondroma, glioma, nor of any of those deviations from muscular tissue, nor of the vascular tumors while spending years of practice upon the nose and throat, and even carcinoma of the nose is so rarely seen that an eminent throat specialist of this city told me that in his recollection he could not recall one case of nasal carcinoma.

The object of this evening's paper is to direct your attention especially to the diagnosis of malignant disease of the nose, and to emphasize a few points which have particularly impressed the writer in his course of reading. Carcinoma and sarcoma of the upper air-passages present symptoms which may for convenience be called general symptoms, or symptoms resulting from the mere presence of a foreign growth in the nose: these are not characteristic, and anything, a button for example, might cause all the general symptoms. A second class of symptoms are of greater importance in putting the physician upon his guard and are also a very considerable diagnostic aid.

The "general symptoms" are hypersecretion, fulness in the head, with headache which may be frontal, parietal, or sometimes a variety of headache, quite constantly symptomatic of nasal trouble, that is an occipital headache extending laterally along the occipital ridges. Supra-orbital neuralgia, sometimes neuralgia of other branches of the fifth nerve occur, particularly when any nerve irritation arises from pressure. If the tumor be large enough deformities of the eyeball, mouth, and cheek occur, and pressure upon the nasal foramina gives all the symptoms of obstruction to the sinus maxillaris, sinus frontalis, ductus lachrymalis, and ductus auris.

The reflex effects are laryngeal irritation, manifested by a constant slight cough and tickling sensation over the thyroid region and the reflex pulmonary effects producing asthma. These reflex effects are merely manifestations of nerve irritation and where formerly these symptoms were claimed by the throat specialist as his particular booty must now be shared with other specialists.

Having considered the general symptoms of malignant disease a second group of symptoms, still somewhat general, yet somewhat more characteristic, meets our attention. For the sake of convenience we will call them symptoms of malignancy. They are infiltration, hemorrhage, ulceration, and pain.

Pain in malignant disease is of two varieties: 1, The pain due to the infiltration; 2, due to its pressure upon the nerve-trunks. Patients suffering from this disease have constant and very severe headaches, both lancinating and dull, and indeed suffer greatly. Some physicians claim the early appearance of the pain and its constancy as elements of diagnosis and some attach great importance to the pain element in a differential diagnosis. I have been unable to find, however, any authentic grounds for believing pain from carcinoma different from the pain of sarcoma, either in character or in earliness of making its appearance. The pain of both diseases is unendurable.

The earliest symptom of malignant disease is infiltration. It is present before it is clinically recognizable; varying in rapidity, extending without any fixed rules, it appears to be altogether independent of the patient's general condition, and infiltration is sometimes most rapid in those patients who are physically strongest.

Hemorrhage is a constant, a significant and characteristic symptom of both carcinoma and sarcoma. With carcinoma, however, earlier and more frequent bleedings are claimed as a differential point. Hemorrhage does not help the diagnosis further than pointing out probable malignancy.

Ulceration occurs with varying rapidity, is generally more rapid in carcinoma, and is accompanied by an offensive discharge, sometimes thin, serous, and bloody; sometimes purulent. A serous sanguineous discharge from the nose should be always regarded as suspicious of malignancy.

The *distinctive clinical features* are the symptoms which aid us in making up a diagnosis of carcinoma and sarcoma. With these symptoms the differences between the two diseases are so pictured clinically that only in very isolated cases does the physician remain in doubt. These characteristic symptoms are appearance, deformity, age, deposits, and locality.

Sarcoma of the nose is a tumor the color of which varies from a red or a bluish-red to a gray. Some authors describe a dark-red as characteristic; others claim that sarcomata are bluish-gray. The consistency of this tumor is variable, but generally hard enough to have definite form and sometimes harder than bone. A carcinoma is red, generally lacking a well-defined consistency, ulcerates more rapidly, and there is no characteristic coloring, as there is to the sarcomatous structure. There is early present a general cachexia of the patient which is absent in sarcoma. Another point of diagnosis is the difference in the external or facial deformities. Sarcomatous cases generally produce their deformities by displacement of normal structures, and by crowding forward, while carcinoma produces its deformities principally by ulceration without displacement. This one great difference in the tendency of sarcomata to protrude and displace, and form well-defined tumors, and of carcinomata to ulcerate furnishes us with a ready means of diagnosis, and indeed in one form of carcinoma occurring in the nose, called glandular carcinoma, there is present only infiltration and ulceration without the formation of any tumor.

The locality and point of development of a malignant

[1] Read before the Section on Laryngology of the New York Academy of Medicine, December 28, 1892.

tumor of the nose is its most important distinguishing feature. From this symptom alone it is possible to make the diagnosis. Sarcoma is very commonly and generally a development or degeneration of a previous tumor of the nose. The particular benign tumors tending to sarcomatous infiltration are fibrous polyps, cartilaginous growths, and polyps. These generally originate well forward and rather low upon the nasal walls. Carcinoma, intra-nasal, is claimed to be a secondary condition; that is, it originates meningeal or pharyngeal and by involvement makes its way forward. I have found reports of two cases which illustrate this point so clearly that I would beg your attention while I read abbreviated reports from them. In the New York *Lancet*, 1842, Dr. G. S. Patterson reports an interesting case, of which he says: "Mr. S——, fifty years of age, began about eighteen months ago to experience some obstruction in the left nostril. The difficulty was, in the first instance, so trifling as to attract little attention of the patient. In the course, however, of about six months the nasal passage became closed. The right nostril, which had been free from all obstruction, became gradually obstructed, and the patient, who had suffered no pain in the tumor, began to complain of severe lancinating pain passing through its substance.

"The following was the state in which I found the case when consulted by Mr. S——: There is considerable disfiguration of the countenance: the nasal process of the upper maxillary bone of the left side is protruded and the ala of the nose on that side is much enlarged and distended by a tumor which occupies the nasal passage, and which protrudes to some extent through the anterior opening of the nares. So completely did this tumor occupy the nasal passage that it was found impossible to ascertain with any precision the situation of its root. . . . The only hope that could be offered to the patient was the removal of the diseased mass which occupied the nostrils. . . . He decided to have the operation performed. . . . With a pair of strong forceps a large detached portion of the bone was easily removed and the chamber of the nostril fairly opened for examination. The antrum was free from all disease—the carcinomatous tumor originated from the ethmoid bone, passed downward, and becoming attached to the lower spongy bone, forced its way through the septum into the right nostril. With a strong bistoury I removed the whole of the lower spongy bone. I then, pulling the tumor downward, carried a scalpel above and shaved off the upper spongy bones, and the nasal lamella of the ethmoid bone from whence it originated, and from the cribriform plate of the same bone: it having been from these processes that the morbid structure originated. The whole mass was now detached, and I was enabled, without difficulty, to remove it."

The *British Medical Journal*, 1880, No. 1,000, reports from the Northern Hospital of Liverpool another case, of which it says in part; "David J——, aged fifty-four, sailor, was admitted into the hospital October 8, 1878. Three years before, he fell a considerable distance on his face, severely injuring his right eye, of which the vision was entirely lost. Since then there has been a gradually increasing swelling of the inside of the nose, with a constant, sometimes profuse, sero-sanious, fetid discharge from the right nostril. The right nostril was completely blocked by the growth and the septum was pushed to the left. There was much enlargement of the right side of the nose and cheek. In the mouth, the tumor slightly encroached on the middle line, and extended back to the soft palate. This case was operated upon and the tumor examined by Mr. Rushton Parker, and was found to be a form of growth of great interest and rarity. It is described by Billroth as glandular carcinoma of the nasal mucous membrane and is, fortunately for the patient, said by him not likely to recur."

Pepper, in the "Transactions of the Pathological Society of Philadelphia," 1880, reports a case of carcinoma naris invading the post-pharynx.

Fowler, in *The Lancet*, 1885, reports a boy sixteen years of age with an alveolar sarcoma naris which could not be felt from the pharynx.

Here, then, is a point of great difference and considerable importance, and from it we may construct a rule: Tumors of malignant character originating intra-nasal particularly well forward and inferior are sarcomatous, while malignant growths involving the ethmoid regions and posterior nares are carcinomatous.

I would here enter a plea for the less frequent use of the microscope in diagnosis of nasal diseases. The microscope should be used to confirm a matured differential diagnosis, made after exhaustive clinical research. More often we allow the microscopist's eye to do our work and replace our research, contenting ourselves with the diagnosis obtained by examining an adjoining piece of tissue some distance removed from the diseased portion. A famous historical example of this was the examination of a piece of tissue removed from the throat of the German Crown Prince.

Another case of even more interest was lately under treatment at the Manhattan Eye & Ear Hospital (Throat Department). A woman presenting symptoms of abscess of the antrum was trephined. Very little pus escaped, and investigation exposed a polyp intranasal with attachment at the os maxillaris upon the affected side. The microscopist captured the polyp and declared it a myxo-sarcoma. The microscopical examination was allowed to overshadow the clinical evidence and a diagnosis of sarcoma of the antrum was provisionally made. A gloomy prognosis, a cessation of treatment, and the patient became worse. Finally an exploratory incision revealed a considerable abscess of the antrum.

In this case the sarcomatus polyp led to an imperfect clinical balance, probably to the detriment of the patient. Therefore a careful clinical study of a tumor of the nose or its sinuses, particularly with reference to its origin, development, and appearance, its deformity and locality, with a careful and nice consideration of the possibility of a complicating disorder, should be and is of more importance than a microscopical examination.

171 West Eighty-first Street.

THE NON-OPERATIVE TREATMENT OF UTERINE DISEASES.[1]

By P. J. McCourt, M.D.,

New York.

Mr. President and Gentlemen: During the practice of any science or art there must, perforce, arise in the mind of the practitioner the query: Can what I am doing be done differently, or better, or both? No one, not a mere routine animal, can resist long the impetus to strike out into new paths, and to make thoughtful experiments.

In the non-operative treatment of uterine diseases, the question of amelioration of method was borne in upon me irresistibly when using the time honored pessary, cotton-wad, and tampon. The prime laws of physics—osmosis and capillary attraction—simple and beautiful in the steadiness of their wellnigh universal working, have been my guides from the inception of this method.

The sponge was found to present many and obvious advantages over all other dressings heretofore employed. It is a soft, elastic, strong, yet yielding cushion and support for retaining the uterus in its normal position, after being reposited. It can carry a large quantity of fluid medicine, which is given up freely to the diseased organs, and receives, in return, the morbid secretions which have been eliminated by the action of such remedy. Owing to its great porosity and delicate structure it cannot obstruct drainage, nor exert injurious pressure upon the parts in contact, nor impede circulation in adjacent vessels.

Again, as we shall presently see, an actual union ce-

[1] Read at a meeting of the Medical Society of the County of New York, April 24, 1893.

curs between the sponge and some of the more important drugs with which it is charged; the drug cannot be washed from the sponge by ordinary means, and will be surrendered only to morbid tissues. Healthy parts will not absorb it, even when left in contact with them during forty consecutive hours. In its natural state, the raw sponge is a most foul substance. To render it suitable as excipient and pessary combined, it must be carefully bleached and made chemically clean. To accomplish this it is first macerated for twelve hours in dilute hydrochloric acid, to dissolve calcareous matter, and to remove foreign and native dirt. It is then washed till free of acid reaction, and immersed in a solution of potassium permanganate until it is dark brown or black in color. Again washed until the water runs clear it is next bleached in a solution of sodium hyposulphite and hydrochloric acid, mixed. Heat and chlorine are evolved by this procedure, and the residuum is colorless. A final washing leaves the sponges soft, clean, and white, with their original tension-strength but slightly impaired. We select one of suitable size and shape, without cutting, for the case in hand, and pass a loop of soft yarn around and just within its periphery, so that the patient may readily remove it. The sponge is now charged with the medicine indicated, the uterus is reposited, if possible, and the dressing is pressed gently but firmly through the vagina, carefully adjusted without folds to the parts, and left in close contact with the os and cervix uteri, and with the supra-vaginal walls. When, from any cause, the dressing induces distress or much discomfort, it should at once be removed.

The patient is instructed to remove the dressing at the end of twelve to thirty-six hours—usually twenty-four—to wash it in aqua ammoniæ, and to keep it wet with a five per cent. solution of carbolic acid until she returns it to us. She is also directed to note carefully the appearance of the dressing and the character of the discharges (as these are now our chief guides in treatment), and to use a warm vaginal douche immediately after the removal of this dressing.

The sponge for our purpose must be soft, fine, and slightly flat—capable of being easily compressed and readily expanding. Those now presented for your inspection are typical in size, shape, texture, and appearance. First on the string we have the raw sponge, containing rock, sand, and dirt. Second, that made black in solution of potassium permanganate, still hard and harsh. Third, that just bleached, soft, white, and elastic. Fourth, four of those used in practice from which the stains left by the discharges cannot be washed: the yellow stains are from pus, the black ones from iron. All, you will observe, are deeply corroded and reduced to fragments by the virulence and acridity of the discharges. Fifth, that also used in practice, still retaining the medicine, on account of the tissues, now restored to a healthy condition, refusing to absorb it.

The dressing, when removed by the patient, will tell its own peculiar and unbiassed story. If the parts are in a normal condition, and the general health is good, it will come away clean, retaining its medicine, and free from offensive odor. The same may result, although rarely, in cases of cervical stenosis or atresia, when the medicine cannot pass through the cervix until it is dilated. If induration is marked, no discharge may appear until the tissues are softened by the proper remedy. But, in the absence of these conditions, we shall usually find traces of blood, and a varying quantity of muco-pus. This latter, in color, may be white, yellow, brown, greenish, or black—the latter from iron. In consistence the discharges may be serous, or viscid and glairy, like white of egg, or thick and creamy, or semi-solid, like a softened crust, or a plastic, cheesy, grumous mass. Portions of polypi, myomata, membranes, etc., may cling to the dressing or follow its removal. At times the quantity of these fluids is startling: and, in cases of cachexia, or when the scrofulous diathesis exists, they may pour away in an almost continuous stream for months.

The sponge itself, which is not materially injured by immersion in strong hydrochloric acid, is often so deeply eroded by these discharges that it falls to pieces on mere pressure, or crumbles like wet sand, and emits an unbearable stench. In the discharges expressed from the dressing, placed under the microscope, little else than pus-globules is visible. The stains cannot usually be washed off, but they disappear at once on contact with the drug that served to produce them.

The drugs that have been found potent upon these dressings are not numerous, although a very large number have been studied with attention. In presenting the exact indications for each, I have neglected form and technique to secure a greater advantage of a concise working guide, as accurate and explicit as I can now make it.

One of the most useful remedies, in its place, is the sanguinaria compound, composed in the proportion of

℞. Tinct. sanguinaria can..... O. jss.
Tinct. aconite.
Tinct. belladonna (of the whole plant).....āā ʒ ij.
Tinct. arnica..... ʒ v.
Water, boiled and filtered.....to make C. ss. ad j.
Mix, and filter.

This compound is employed at the commencement of a case, unless another drug is clearly indicated, and for the effects of exposure to cold; for the great majority of pelvic inflammatory affections and their immediate sequelæ, or whenever there is elevation of temperature: and in local hyperæmia and hyperæsthesia. It will disintegrate myomata, polypi, and other neoplasms; eliminate latent iron, and has repeatedly caused the rapid absorption or evacuation of pelvic hæmatocele. It may be combined with any other drug hereinafter indicated, except an acid, and should be diluted alike for the plethoric and the anæmic.

Sanguinaria Simplex.

℞. Tinct. sanguinaria can..... 1 part.
Water, boiled and filtered..... 5 parts.
Mix, and filter.

This fulfils some indications of the sanguinaria compound, in the absence of high temperature, local congestion, and abnormal sensibility.

Potassium chloride (3 grammes of the crystals to 1 litre of water) is indicated in catarrhal conditions when the secretions are thick and white, or yellowish-white, or gelatinous, but not irritant or viscid, and in the case of enlarged lymphatics of any part.

Potassium sulphate (5 grammes of the crystals to one litre) is required whenever the secretions are yellow, and in local adhesions.

Sodium chloride (7 grammes to 1 litre) is to be employed in serous, acrid secretions, and in local pruritus.

Sodium sulphate (5 grammes to 1 litre) is used when the secretions are greenish or greenish-yellow, in sycoma, and in acute and chronic gonorrhœa, with their sequelæ.

Sodium biborate (8 grammes of the crystals to 1 litre) is indicated in catarrhal conditions, with dense white, viscid secretions, and in sterility.

Ammonium chloride (6.5 to 80 grammes to 1 litre) is used in the conditions last mentioned, and in the nodular variety of myomata.

Tinct. hydrastis can. (1 part to 5 of water) is useful when there are yellow, viscid secretions, polypi and irritable carunculæ.

Tinct. apocynum cannabinum (1 part to 5 of water) is employed in induration, flexion, and elongation of the cervix, usually when there is no secretion.

Tinct. conium mac. (1 part to 30 of water) is indicated in induration with white, milky secretions, pain and swelling of the mammæ at the catamenial periods.

Acetic acid, c. p. (1 gramme to 1 litre), is useful in uterine cancer, to control its progress and fetor.

Tannic acid solution is beneficial in uterine hemorrhage, and is prompt in its action and efficient for several hours.

The tinctures are made strong, like Fleming's tincture

of aconite, and from the fresh root or plant. Dry plants are valueless for our purpose, and officinal tinctures contain too much alcohol and too little of the drug. Fluid extracts have afforded no satisfaction.

The salts employed are those of Merck, of Darmstadt, and are all chemically pure.

By frequent use of this curved intra-uterine clinical thermometer, which I designed specially for this study, it has been found that a disproportionate local elevation of temperature exists in a number of uterine diseases. Although this interesting fact is nowhere taught in our text-books, it will serve to guide us in the use of the sanguinaria compound.

The drug employed should be suspended, or give place to another, when its allotted task has been accomplished. To persist in its use beyond that limit, or to apply it too strong, may cause erosions, and leave our patient worse than we found her.

It is to be borne in mind that the dosage of this method cannot be even approximated, except by the fixed rules for individual cases, with which you are all familiar. The dose varies to such an extent that its mention might as well have been omitted, as it may lead the careless astray. Idiosyncrasy, also, is more apparent here than when medicines are ingested, and it must never be ignored.

In the *modus operandi* of this method, the first step is by endosmosis. The remedy carried by the sponge is taken up by the capillaries of the uterus or adjacent tissues, or by the lymphatics. It is conveyed first and chiefly to the point of highest temperature, or that in most intense morbid activity. If the uterus and its appendages are healthy, the medicine will neglect these organs, and will, if appropriate, pass by "elective affinity" to any tissue where inflammatory or suppurative action exists, to the rectum, bladder, lymphatics of any part, or even to an ulcer on the leg; and the patient will be conscious of medicinal action at that remote point in a short time after the dressing is applied.

The first effect of the medicine is to modify abnormal temperature, if any exists; next to separate matters which may be either cause or product of disease; and then to convey these matters from the body by exosmosis. The final step is one of drainage of such material as has been freed by the specific remedy.

Turning now to the results obtained in practice, these are more numerous and important than might be inferred from our limited resources. When the drugs named are employed in accordance with the indications given, the results have usually been found satisfactory in a wide range of morbid conditions.

Iron that has remained latent in the body will be eliminated by a number of the remedies. My experience leads me to believe that when an officinal preparation of that metal is ingested, a three fold destiny awaits it. First, a very minute quantity is assimilated, if the state of the body needs it—otherwise none. Second, by far the greater portion is cast off with the fæces. Third, another portion is changed to a tannate, and forms a permanent union with the tissues, as does lead; and its presence will favor inflammatory and suppurative action. It is this latter portion of the iron that is eliminated by the treatment. In many cases where such iron had been latent in the body for ten, twenty, and thirty years, during which time the drug had not once been administered, it has come away on these dressings, rendering the water in which they were washed black as ink, and giving the characteristic reaction to all the ordinary tests. The process of liberation is frequently accompanied by distressing nervous phenomena.

In view of this experience, and with all due deference to the opinions of others who have not shared it, I must emphasize my objection to the prevailing dosage of this valuable agent. Ferrum redactum, in triturate of 1 to 100, has afforded me results more prompt and permanent than those of massive doses, and without their toxæmia. Larger doses will discolor the dressing, as will these when not called for by our patients' needs.

Aside from iron, some one or more of the other discharges named accompany almost every stage of successful treatment. And these discharges may continue long and copious after all apparent traces of local disease have disappeared—until the general health is restored and the skin is smooth and clear. Then they cease.

The discharges themselves may be non-irritant; but are often so acrid as to almost blister the parts over which they pass. This acridity of the matters cast off is manifest long before their appearance upon the dressing. Thus, a patient who feels herself nearly cured after the first few weeks of treatment, suddenly retrogrades. The half-forgotten aches and pains, exhaustion and general nervous irritability of former times all return. The symptoms may continue, and become intensified for a period of from four to ten days, when a dressing comes away loaded with fetid or scalding pus, or, more frequently, black with iron—and relief follows within the hour.

Some of the neoplasms, as myomata, polypi, condylomata, irritable carunculæ, etc., have been found amenable to this treatment. Twenty-two cases of uterine fibroids have thus far been treated without operative procedure. One of these resulted fatally, owing to extensive attachments of the tumor. Another, with a family history of cancer, discontinued treatment because of my guarded prognosis. Three are still under treatment, with fair prospects of relief (they have since been discharged); and in the remaining seventeen cases recovery appears to have been complete. In six of the latter relief by operation had been pronounced hopeless.

Portions of these myomata are now before you, some of which, you will observe, have come away necrosed. Disintegration is, as we might expect, much more rapid in the œdematous or fibro cystic, than in the hard or nodular variety of this growth. The chief danger—and often a serious one—in the breaking down of a myoma arises from septicæmia.

Among affections of the vulva satisfactorily treated are vulvitis, the first stage of labial abscess, pruritus, hyperæsthesia, angiomata, eruptions, and the neoplasms already named. A three-sided sponge dressing is employed, retained by a T-bandage.

Vaginitis, simple and specific, together with its immediate and remote effects, has usually been promptly relieved. A cylindrical sponge, of suitable diameter and of a length sufficient to extend from the urethra to the os uteri, is required.

In occlusion of the vagina and stenosis of the cervix, following traumatism, or resulting from chemical or inflammatory action, results have been very satisfactory. When the vagina was occluded by a diaphragm, or by thick bands or dense septa, caused by adhesive inflammation, these formations have been broken down or absorbed upon the application of a few dressings, and the integrity of the canal restored.

Vaginismus has seldom been found obstinate. In severe cases, soft, light dressings were applied for a few days or weeks; the canal was then fully dilated, under ether when necessary. Distention was maintained by a cylindrical sponge, as large as possible, kept fed with the remedy. Dyspareunia from other causes has been relieved by similar means, applied always to the objective point.

Erosions, or granular and cystic degeneration of the os and cervix, and not infrequently the minor lacerations which may occasion these lesions, have healed promptly, or the parts have been left in the best condition for operation.

In flexion, elongation, stenosis and induration of the cervix, dilatation should be deferred until the tissues are softened; for when forcible dilatation was resorted to without previous treatment the relief obtained was only temporary, while the cervical substance was partially changed to cicatricial tissue, and filled with minute fissures—the sulci being clearly visible under a suitable lens. When plasticity is restored by this treatment we

shall often find that dilatation is no longer essential; and where it is, the operation will give but slight pain and permanent relief.

In chronic cervical endometritis, as we are all aware, the canal is virtually closed by a viscid secretion, nearly as tenacious as liquid glue. This secretion is best removed by mechanical means, as it is almost impervious to any drug known; but I will yet find its solvent.

In accordance with the indications, we apply such remedies as will allay irritation, free the os, or soften the neck, and then open the canal with a dilator like that shown you. This instrument affords circular dilatation to the extent of one-half inch in a very satisfactory manner; and its advantage over bilateral dilators will be appreciated.

If, for any purpose, it be deemed necessary to carry the dilatation further, this larger instrument—which also may be used as a uterine speculum or rectal dilator—will serve us admirably. Both dilators were designed by Dr. Molesworth; and the smaller one has been modified by myself.

The cervical canal once opened, we may clear and cleanse it in a moment by the aid of this cervical broom (also devised by Dr. Molesworth), making rotary traction after withdrawal of its shield. The cervical cavity is then packed with a suitable sponge charged with the indicated remedy, and retained by the usual dressing to the os uteri. These measures have been found efficient in restoring the mucous glands and membrane to their normal condition, and they serve equally well in chronic corporeal endometritis.

Congestive hypertrophy, areolar hyperplasia, and subinvolution of the uterus are tractable to a marked degree. In these lesions, as in the neoplasms, it appears that new connective-tissue formations in non-malignant growths are rapidly acted upon. The abdominal enlargement attending these hypertrophies has been reduced, by actual measurement, three, four, and six inches, often in half as many weeks. During such changes the discharge upon the dressings, and following their removal, is usually copious, often, indeed, immoderate.

Uterine displacements accompanying these hypertrophies are, with few exceptions, corrected before the lesions themselves. When the uterine ligaments, vaginal walls, and abdominal muscles regain their normal tonicity, the womb assumes its normal position and is there maintained. In a woman, aged seventy-four years, whose uterus hung free between the thighs for seventeen years, the organ was reduced to the first degree of descent, and retained in that position without further support, after ten months' treatment.

In some forms of anteversion and retroversion it is essential to adapt the sponge with perfect accuracy, else both local and general nervous irritation may result. In the third degree of prolapsus, and in lacerated perineum, a firm cup sponge may be required.

The atony and flaccidity of the vaginal walls and perineum, so common in these displacements, presenting a gaping passage, allowing the uterus to descend, and rendering coitus pleasureless, are readily overcome, and a firmly contracted vagina results.

Dysmenorrhœa, menorrhagia, and amenorrhœa, with their complications and sequelæ of hysteria, anæmia, melancholia, sterility, etc., have been relieved in a majority of instances. The ovarian variety of dysmenorrhœa has been, as we might anticipate, the most persistent, but even that has frequently been relieved in a very satisfactory manner.

In diseases of the Fallopian tubes—especially salpingitis, pyo-salpinx, and hemato-salpinx—the patient is placed upon the corresponding side, the thorax depressed and the pelvis elevated, while the dressing is fed with medicine from a suitable syringe until the vagina is filled. Enlarged and distorted tubes have thus been suddenly reduced to a nearly normal size, after a copious discharge of pus or blood with, or immediately following, removal of the dressing.

This method of treatment has its disadvantages and impediments. Chief among the former may be noted its cost in money, time, and skilful manipulation.

Again, laceration of the perineum is an impediment. When the pelvic floor presents but an inclined plane, the dressing, lubricated by the secretions, will slip down from the os uteri, after which it can only irritate. Here we may choose between immediate operation, or treating the patient after she has retired for the night, or employing a sponge of sufficient length to pack the vagina, holding it then in place by a T-bandage.

Great impairment of the natural instinct, in women of proper age, will often forbid hope of cure. Treatment may at times restore it; but as a rule in such instances, when maiden ladies and widows either cannot or will not marry, we may as well abandon the case. Even when the medicine is absorbed, drainage cannot be established.

Unbalanced, inadequate, or chaotic circulation is a serious impediment; and it is aggravated by the prevailing mode of dress. In winter the nates and adjacent parts are so often chilled by cold air currents as to cause local anæmia. This deprives the genitalia of the blood-supply necessary for their repair, favors catarrhal inflammation, and induces passive hyperæmia in other organs.

Noxious articles of food present an impediment of the first order. The pampered gourmand, the subject of shattered nerves, and the dyspeptic with either boulimia or anorexia, may each crave the ingesta best adapted to perpetuate their abnormal condition. For these we can do but little until their habits are corrected.

To be explicit in this important particular, I have found it necessary to forbid all stimulants, strong and green tea, toast, oatmeal, fried, rich, and greasy food, cake, and all condiments; as well as milk and coffee to women of bilious temperament.

If this treatment can cure disease by draining the body of its *materia morbosa*, it follows that we should cut off the supply of every agent capable of replenishing those matters. Among such agents are chickens, ducks, overkept or tainted meats, cheese, and other putrescent substances.

But even these articles of food are less injurious than swine-flesh. We cannot cure a woman while she eats pork in any form. So long as the habit is indulged in, her dressings will carry away purulent secretions; and such secretions will cease with the habit. From long and close observation of swine, as well as from a very attentive study of those who eat and who do not eat of their meat, I believe that the carcass of the hog is the abode of filth, scrofulosis, and pyogenic elements I also believe that the marked immunity of the Jewish people from pulmonary phthisis and pulmonary tuberculosis is due solely to their abstinence from swine-flesh.

In our practice of gynecology, whatever the procedures adopted, we should bear in mind that women have other organs than the uterus and its appendages. A diseased rectum, a congested liver or obstructed bowel, which few women are without, rheumatism, neuralgia, and even gout may present symptoms almost identical with those of uterine disease; and for the relief of these conditions we should not attack the uterus. Hence, I would emphasize the value and the necessity of general and constitutional treatment, which should never be lost sight of.

I have strong hopes, gentlemen, in the future of this method. I believe that in far more skilful hands than mine it will accomplish much for the health and happiness of suffering women; and *that* service is the highest honor we seek.

233 West Twenty-third Street.

Aristol in Small-pox.—Dr. W. H. Fox, of Tacoma, Wash., writes that he has used aristol with a view to prevent pitting in variola. His experience with it has not, however, been sufficiently great to satisfy him as to its efficacy, and he would be glad to learn whether others have employed the same substance for this purpose, and if so what the results have been.

COLD BATHS AND COAL TAR.

By OSCAR H. MERRILL, M.D.,

CORINNA, ME.

A good deal has been written during the past year or two in favor of cold baths and against the use of the newer antipyretics. As is apt to be the case in such matters, the statements made by many of the writers have been rather strong in regard to the value of the baths, and anathemas pronounced against the coal tar tribe have been suggestive of a war of extermination. It is an undeniable fact that the average practitioner has been using these new drugs with considerable recklessness and with disastrous results.

Thus, in a case seen last year in consultation, the attending physician, who was a regular graduate of several years' experience, had been giving a man sixty years of age, with grippal pneumonia, fifteen grains of acetanilide every four hours, as he said, with evident pride, "to keep his fever down;" and it is believed that such dosing is not uncommon.

If violent language and exaggerated statements were ever allowable in scientific writing, surely they might, in such practice, find valid excuse.

Many and serious are the mistakes made in matters of dosage, and in no case is the regulation of the dose more important or more difficult than with regard to the antipyretics. Because overdoses cause excessive sweating, cyanosis, chills, and collapse, we are told that these remedies should never be used—regardless of the fact that most of the medicines in common use are also in overdoses active poisons. Not only is there great difference in the susceptibility of individuals, but in different stages of a febrile disease very different doses are required.

When a typhoid fever is on the decline, a dose which produced little effect a week before will now act inordinately—perhaps reducing the temperature to 97° F. Constant watchfulness with frequent use of the thermometer will enable an intelligent physician to administer phenacetine in such doses as will, in most cases, keep the temperature below 103° F., without visibly depressing the patient. Reference to the following case of typhoid fever with hyperpyrexia, which occurred in a child aged five years, will show the effects of baths and phenacetine:

At 7 A.M., after a cold bath, the temperature was 100° F.; at 8.40 A.M., 106° F.; at 9.15 A.M., after a bath, 100° F.; at 10.25 A.M., 104° F.; at 11 A.M., 105½° F.; at 11.40 A.M., after a bath, 99½° F.; at 1 P.M., 107° F.; at 1.30 P.M., after a bath, 102° F.; at 2.40 P.M., 105° F.; at 3.15 P.M., after a bath, 101° F.; at 4.20 P.M., 107° F.; at 5 P.M., after a bath, 101° F.; at 6 P.M., 105° F.; at 6.50 P.M., after a bath, 101° F.; at 8 P.M., 107° F.; at 8.30 P.M., after a bath, 100° F.; at 9.45 P.M., 105½° F.; at 10.30 P.M., after a bath, 97½° F.; at 12.15 A.M., 106° F.; at 1 A.M., after a bath, 100° F.; at 1.45 A.M., 103½° F. At this hour the child received four grains of phenacetine, and at 3.30 A.M. the temperature was 102½ F.; at 4.30 A.M., 101½ F.; at 5.30 A.M., 101° F.; at 6.30 A.M., 100½ F.; at 9.30 A.M., 102° F.; at noon 105° F. For many days the temperature record was substantially as stated. It will be noticed that the baths had to be repeated every hour or two, and that even then 107° F. was reached.

Moreover, the child had to be kept in the tub fifteen minutes each time, the temperature of the water at the beginning being 90° F., and at the end of the bath, 70° F. Each bath was followed immediately by a quiet sleep of one hour, at the end of which time extreme restlessness with lividity of the face appeared and continued till the fever was again reduced.

During each bath there was continual moaning and begging to be taken out; but even a casual observer could see that the treatment was doing good.

After the phenacetine was administered the temperature remained within reasonable limits for ten hours—and during these hours the patient slept a good deal, the pulse was better, the sweating slight, and indeed no unpleasant effect could be discovered.

This experience was repeated daily with some variations for two weeks, after which convalescence was established and recovery was completed later on. In this case sponging, cold packs, and other minor hydro therapeutic measures failed to produce any effect except to annoy the patient. In giving internal antipyretics the size of the dose should depend entirely on the effect produced, a difference of half a grain sometimes making all the difference between a pleasant and an unpleasant effect. The ordering of a definite number of grains at regular intervals, as is often done, is as dangerous as the ordering of a cold bath at regular intervals regardless of the existence or non-existence of hyperpyrexia. It has been found that intelligent people can be taught in an hour to use the thermometer, and a few persons learn quickly to administer either phenacetine or cold baths with a close approximation to correctness. In the case cited above, the details of the treatment were carried out by four young people wholly without experience in such matters, and on two occasions only did they so far overdo the matter as to reduce the temperature to 97° F. It will not, however, be seriously contended by anyone who is familiar with the mental equipment of the lower and middle classes, that antipyretic treatment, whether by baths or drugs, can as a rule be safely left to the family. Trained nurses being in such families out of the question, and the constant attendance of the physician an impossibility, it follows that we have to decide not what treatment is best, but what treatment is possible under the circumstances. Despite the assertions of some enthusiasts, it will in a great many of these cases be found to be impossible to get any benefit from baths, principally on account of the mental deficiencies of those who act as nurses.

In such cases the patient may be much benefited by having one or two doses of phenacetine each day. Further, where baths can be employed it is sometimes a distinct advantage to give an occasional dose of an antipyretic drug, and thus get from four to ten hours of rest with comparative freedom from fever, instead of constantly disturbing the patient by administering baths. It is now pretty well established that baths and internal antipyretics are both valuable measures in the treatment of high fever; that both must be used with great care and judgment in order to do good; and that it is as irrational to use either to the exclusion of the other, as it would be to reject mercury in the treatment of specific disease because iodide of potassium will relieve some cases.

Some men, however, are born to be partisans. They can see only one side of a board. They are proof against your "scientific spirit," against your "general culture," against your "progress of the age." The spirit of the crusaders dwelleth in them. They carry into scientific discussion the methods of the battle-field. They scent the odor of coal-tar from afar, and get unduly excited. Because cold water is good, you must subsist upon cold water alone. You must not even touch warm water.

The question has been asked whether physicians of that type ought not to have been lawyers, or temperance lecturers, or members of the military profession. Such men may discover continents, but cannot weigh evidence. They may spread the true faith in heathen lands, but make sad work in science. They are in great part responsible for those fashions, fads, and rigs which are the disgrace of nearly every department of medicine. It appears after an examination of their writings that there are styles in therapeutics as well as in trousers—that medical theories and practices revolve on their axes, and that they also revolve around the central sun, Truth, in very eccentric orbits.

It would seem desirable that some definite law be formulated concerning these movements, and that a medical almanac be constructed which shall be for the medical navigator what the nautical almanac has so long been for the maritime navigator.

Progress of Medical Science.

Tuberculous Inspiration-Pneumonia.—Professor Bäumler calls attention to a form of broncho-pneumonia that may occur in cases of pulmonary tuberculosis from the inspiration of blood and the contents of pulmonary cavities (including pyogenic cocci and tubercle bacilli), in conjunction with hæmoptysis. A similar condition may arise in the absence of hemorrhage, or in connection with an ordinary bronchiectatic cavity, but under these circumstances the course of the case is generally much less unfavorable. The tuberculous inspiration-broncho-pneumonia may occur in cases in which a pulmonary lesion is not even suspected, or in which a tuberculous lesion has undergone retrogressive change. It is usually preceded by some form of active physical effort, and commonly pursues a rapid course, presenting the characters of an acute infectious disease, and leading to a fatal termination. The first manifestation is usually hæmoptysis, which may persist in moderate degree for a number of days. The febrile movement is decided, and the temperature usually reaches a considerable height. Dyspnœa is marked, and cyanosis becomes pronounced. On physical examination the signs of a diffuse broncho-pneumonia will be found. Careful examination of the sputum will detect tubercle bacilli. After death a tuberculous cavity, containing a ruptured blood-vessel, will be found in one or in both lungs, and, besides, a lobular pneumonia; miliary tubercles may also be present, but not as a rule in any considerable number. The clinical picture differs from that of enteric fever in the abruptness of onset, in the rapidity of course, in the period at which the pulmonary symptoms appear, and in the occurrence of hæmoptysis. A knowledge of the previous history is important. Tuberculous inspiration-broncho-pneumonia sets in more abruptly than acute miliary tuberculosis; pursues a more rapid course; is attended with a higher febrile movement; cyanosis appears earlier; and the physical signs are distinctive. From ordinary bronchopneumonia the tuberculous variety differs in the occurrence of hæmoptysis and in the presence of tubercle bacilli in the sputum. The prognosis is always dubious, and as a rule unfavorable. The treatment is purely prophylactic. Patients with pulmonary cavities, and with tubercle bacilli in the sputum, should be cautioned against indulging in too active physical exercise; and as the existence of cavitation is not always demonstrable, great circumspection should be used in advising pulmonary gymnastics. These patients should avoid irritating atmospheres. When a tendency to hæmoptysis manifests itself, they should be enjoined to observe the most perfect rest.—*Medical News.*

Laryngeal Syphilis in Childhood.—Dr. Strauss says syphilis of the larynx occurs in general in probably from three to six per cent. of all cases of syphilis. In childhood laryngeal syphilis seems very rare. Some of the reasons for this may be that laryngeal examinations in early childhood, being very difficult, are often not undertaken; the laryngeal symptoms may be very slight, and syphilitic ulcerations show such a tendency to spontaneous healing that, if other syphilitic manifestations are present, the laryngeal ulcers may heal without being diagnosticated. The writer reports three cases, in all of which the epiglottis was much swollen, in one ulcerated. In one case there was a large ulceration on the posterior laryngeal wall. He cites fourteen cases reported by others, and divides the cases into those in which the appearances of syphilis were present in the first months of life, and those in which they were absent. Only one case could be proved to be hereditary. In these cases changes were seen in the epiglottis, the ary-epiglottic folds, and the posterior laryngeal wall. Characteristic of this affection are: 1. The seat of the process; preponderating in the epiglottis, having in general the appearance of a perichondritis with relatively frequent necrosis of the cartilage. The ventricular bands are not rarely affected. 2. The preference which the process shows for appearing in a papillary form, if not in the form of a simple swelling. In only two of the cases were ulcerative or cicatricial processes wanting on the pharynx or palate. In one of these there were extensive changes in the epiglottis. In another case ulceration of the uvula appeared only after extensive changes in the epiglottis. The disease is more rapid, and prognosis worse than in adults. Laryngeal examination is important for diagnosis. The cases seem to yield readily to specific treatment.—*International Medical Magazine.*

Thyroid Extract in Myxœdema.—A series of papers and cases have been published during the past eighteen months in the *British Medical Journal*, on the treatment of myxœdema by thyroid extract. At a meeting of the Clinical Society a number of patients who had been treated in this way were recently exhibited. According to our esteemed contemporary, four of them had been treated by Dr. Davies with thyroid extract in powder, one powder (corresponding to an eighth of an entire thyroid from the sheep) being given every day in tepid beef-tea. All the patients had rapidly improved, one special indication of the improvement being the somewhat rapid loss of weight, which commenced as soon as the treatment was begun. Another patient had been treated by raw gland given twice a week, at first with half a small gland for a dose, and lately with a whole gland daily. This was too large a dose, however, for after the administration of five glands in the above manner toxic symptoms were developed, accompanied by extreme feebleness of the heart; whereupon the quantity of the gland taken was reduced. Dr. Calvert's patients had been treated with half a thyroid three times a week, fried sufficiently to render it palatable. Dr. Murray detailed his experience of glycerine solution of thyroid juice. He now injects very slowly under the skin fifteen minims of a solution, of which ninety minims correspond to one sheep's thyroid. He had found that to produce the same effect four times as much had to be administered by the mouth as was required when the remedy was injected beneath the skin. The treatment occupied two stages, the first lasting until the subsidence of the symptoms; the second, when a much smaller dose was required, was designed to maintain the patient in health. The actual dose that sufficed for this purpose was a fortnightly injection of twenty minims. The great benefit accruing to the patients, in whatever way the remedy might have been administered, was very evident, and, as Dr. Ord observed, was all the more gratifying from the fact that two years ago the disease was regarded as incurable.

The Systolic Bruit of the Fontanelle.—In an inaugural thesis Winkler presents a comprehensive study of the so-called systolic brain murmur, first remarked by Fisher, of Boston, in 1833. An examination of more than six hundred children has furnished fifty cases which presented this symptom. This bruit is blowing in character, is always synchronous with the cardiac systole, and is quite markedly intermittent just before its disappearance. Its seat of maximum intensity is at the fontanelle, but it may sometimes be perceived in all the regions of the cranium. No connection exists between its intensity and the size of the fontanelle, but there are variations of intensity in the same subject without appreciable reason. When he was able to auscultate the carotid, the author has detected a bruit—a fact which tends to confirm the carotid origin of the murmur, as is held by Roger, Steffen, and Epstein, of Prague. Eighteen of the fifty observations were in perfectly healthy children, while the remaining cases were found in children suffering from rachitis, pseudo-leukæmia, diphtheria, furunculosis, and various acute inflammations of the respiratory or gastro-intestinal mucous membranes. It is, therefore, evident that no pathognomonic importance can be attached to this phenomenon. As to its pathogeny, the author thinks that a venous origin cannot be accepted; nor can the theory of compres-

sion of the artery in the carotid canal (Jurasz), or by enlarged cervical glands (Epstein), be held for all cases. He believes that this murmur is due to sudden changes in arterial tension, such as occur in aortic insufficiency; basing this opinion upon the character of a number of sphygmographic tracings which he obtained from his patients, and in which he has found a resemblance to the characteristic tracings of the Corrigan pulse. In addition to this, the administration of digitalis to some healthy children presenting the murmur caused a disappearance of the sound by regulating and raising the tension; and, again, the lowering of tension produced by fever provoked the appearance of a bruit previously absent. These observations indicate that the systolic brain murmur is spontaneously produced in the great arteries of the base, being dependent upon conditions in the child favorable to the production of arterial murmurs, and upon the coincidence of a fall in tension and arterial pressure with an energetic cardiac action. It is, therefore, evident that this murmur will be encountered in diverse diseases, whenever the determining conditions present themselves. With healthy children it should not be considered absolutely normal, but as slightly pathological, and requiring some watchful attention. The time at which this murmur can be heard (three to five months to three to five years) corresponds to the time when the arteries are not very resisting, are proportionately larger than in later life, and very poor in elastic fibre. These conditions favor the production of the phenomenon. It is probably for this reason, as Epstein has observed, that the bruit of the fontanelle is so often observed in rachitis.—*American Journal of the Medical Sciences.*

Some Effects of the Removal of the Ovaries or Uterus.—Dr. Grammatikati has reviewed the after-histories of a number of cases in which the ovaries have been removed, the uterus being left behind, and compared them with the histories of cases where the uterus has been removed by vaginal hysterectomy, the ovaries being left behind. Removal of the ovaries, if complete, is followed in at least half of the cases by menstrual molimina which last for a few months. Then appear climacteric troubles. The mental and physical symptoms seen at the normal menopause appear; sometimes melancholia sets in. In about forty-two per cent. the remarkable deposits of fat in the breasts, abdominal walls, and buttocks appear. This is not due to an excess of nutrition, but to vasomotor influence. When the uterus is removed and the ovaries left behind, the effects are far more serious, especially in young subjects. The menstrual molimen, which cannot find its natural relief, becomes very trying. Hence Grammatikati insists that when the uterus is removed in young patients the ovaries should always be taken away as well. Contrary to what is taught by the supporters of hysterectomy, it appears that the ovaries do not atrophy if left behind. Grammatikati had the opportunity of examining the ovaries of a woman who died at the age of forty-three, three years after he had removed her uterus. He found the ovaries quite normal and full of follicles, some ripening or breaking.

Poisoning by Exalgine Dispensed Instead of Quinine.—Dr. Francisco Reynery reports the following case (*The Lancet*). A boy two years of age, who was suffering from malarial fever, was ordered some quinine powders, one of which was to be taken every two hours. The powders dispensed, however, contained, as was afterward discovered, five grains of exalgine. The first dose was stated to have been almost entirely vomited about half an hour after being taken; some prostration and two more attacks of vomiting followed. The second powder was given three hours after the first and produced such serious symptoms that the mother sent hastily for the doctor in attendance, informing him that the child had been poisoned. When he arrived, an hour after the second powder had been given, he found the child's face and hands of a dark-blue tint, which was still more marked in the nails, the scrotum, and the penis; the right half of the lower lip and of the tongue was black, there was copious vomiting of mucus, and sweat standing on the head and the upper part of the body; the pulse could not be counted, the heart's sounds were confused, the epigastrium pulsated, and the veins of the neck were very marked, and indeed had been still more so, according to the mother's statement; the carotids were pulsating and swallowing movements were frequent; the epigastrium was tender upon pressure. The child had passed some dark-gray urine containing traces of albumin. The symptoms appearing to resemble those due to acetanilide, the practitioner prescribed coffee and brandy, an enema containing ether, and a stimulating liniment to be rubbed over the whole body. On inquiry at the pharmacy the exact nature of the dispenser's error was discovered. Further examination showed that sensation in the lower limbs was diminished. After a few hours the discoloration had become decidedly less, the temperature, which had been a degree below normal, had become normal, the sweating was confined to the forehead, there was considerable thirst, but no more urine had been passed and there had been no more vomiting. The next day some dark urine was passed which contained a considerable amount of albumin; the color was increased rather than diminished by heat and by the addition of an acid. The discoloration of the skin, the want of sensation, and the other symptoms gradually disappeared, and by the end of ten days the child was convalescent.

Clinical Department.

DIFFICULT LABOR FROM DORSAL DISPLACEMENT OF THE ARM OF THE FŒTUS.

By E. N. GRAY, M.D.,

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THE following case is put upon record on account of the rarity of its occurrence. Playfair, in all his great obstetric experience, met with but one such case: and in most text-books on obstetrics the occurrence of dystocia from dorsal displacement of the fœtal arm is mentioned but slightly, if at all.

On the evening of January 16, 1892, I was called in consultation to see Mrs. M. S——, a large stout woman about forty years of age, and the mother of several children. She had been in labor all day. The attending physician said that all had been normal until the os uteri was fully dilated. Though no cause was apparent, the head refused to descend. Two doses of ergotole had been unwisely given, and when I saw the patient at 8 P.M. the uterus was in a state of tonic contraction, the pulse very rapid and weak, and the woman very restless and anxious. A vaginal examination revealed a large roomy pelvis; the head was above the brim in l.o.a. position, and was not disproportionately large. No cause could be found for the failure to descend.

The patient's condition demanding a speedy delivery, we were confronted with the choice of one of two procedures; version, or a high-forceps operation. I opposed the forceps because of the difficulty of applying them above the brim, and because the reason for the dystocia not being known, the forceps might not prove of service even if we succeeded in applying them properly.

Version being finally assented to I introduced my hand into the uterus, and at once found the cause of the trouble. The right arm of the fœtus was displaced backward across the neck of the child resting on the brim of the pelvis, and thus rendering descent impossible. This displacement is well shown in Playfair's "System of Midwifery," third American edition, Fig. 116, p. 320, except that in my case the backward displacement was more marked than is shown in the cut. Version was effected without trouble, and the child, though dead, was extracted as rapidly as safety would allow.

In such a case as this, a diagnosis is, of course, impos-

sible until the hand is in the uterus; and it is evident that the forceps would have been of no service, as was true of Playfair's case, which was delivered by turning after he had failed with the forceps.

CURETTING FOR THE CURE OF ENDOMETRITIS AND CONTINUED HEMORRHAGE FOLLOWING ABORTION. REPORT OF FOUR CASES.

By GEORGE N. MURPHEY, M.D.,

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I CLAIM nothing original in this method of treatment, as I was taught the art some time ago at the Policlinic School of Medicine, in Chicago. My reasons for reporting these cases are because I do not believe this method is in general use among country practitioners, and for the additional reason that it has always succeeded in my hands and in the hands of others so far as I have observed. Although I have not had a very extensive opportunity to observe this treatment, yet I have seen no unfavorable results following it. I will further preface my remarks, for the sake of brevity and to avoid repetition, by saying that each and every operation, except Case I., was done under the strictest antiseptic precautions by sterilizing all instruments used and thoroughly cleansing my hands with hot water, soap, and nail-brush; and lastly rinsing my hands in a bichloride of mercury solution 1 to 1,000. I also washed the external genitals and vagina with a bichloride solution of 1 to 1,000 strength. I used the steel dilator in Cases II., III. and IV., as otherwise I would not have been able to introduce the curette. This part of the work required about fifteen minutes, and should be done very carefully, opening the blades of the dilator gradually. Several times during the dilatation I closed the blades in order to restore circulation to the parts pressed upon, and thereby prevent strangulation and sloughing. I prefer a dilator with a graduated scale between the blades, as it enables one to see just how much he is dilating. I generally dilate about three-fourths of an inch.

CASE I.—On July 17, 1892, I was requested by Dr. T. B. Wright, of this city, to see with him in consultation, Mrs. E——, aged thirty-two, who gave the history of having aborted in the third month of pregnancy. As she was unattended in her first illness by a physician, she was unable to state whether all the after-birth came away or not. When I saw her she was very much emaciated, and was almost exsanguinated from loss of blood, hemorrhage having continued more or less profuse since her abortion, four weeks previously. Placing her upon a table in the Sims' posture, and with the aid of a Sims' speculum, I found the uterus quite low in the vagina, the os very patulous, so much so indeed that I found no trouble in introducing the index finger into the uterine cavity, where I found and detached a piece of retained placenta about the size of a pigeon's egg. I then gently curetted the cavity with a sharp curette, removing some diseased mucous membrane, after which I washed out the cavity with a warm carbolized solution, and then mopped out the uterus with pure carbolic acid with absorbent cotton on the end of a wire applicator. This operation was done without an anæsthetic, and produced little pain. The patient was then put to bed, and given half a grain of morphine hypodermically. I left and returned with Dr. Wright the following day and found the patient resting comfortably, but her temperature was slightly above the normal, 99° F. Pulse was weak and numbered 120 a minute, which it was before the operation, and never rose above that number. On my second visit, however, I found her cheeks flushed, considerable nausea and vomiting, some pain in the uterus, and temperature, 101° F. I immediately placed a rubber coil upon the abdomen, over the uterus. A tub of ice-water was placed beside and above the level of the bed, and a continuous stream was kept running through the coil for twenty-four hours. At the end of this time I found her temperature normal, stomach quiet, and no pain. With a few doses of salts to move the bowels, whiskey and quinine as a stimulant and tonic, she made a rapid and uneventful recovery. I saw this patient six weeks later, when she informed me that she was perfectly well. She had gained considerably in weight and looked the impersonation of good health. The hygienic surroundings of this woman were as unfavorable as could well be imagined, as she was occupying one small room with four dirty children, and everything as filthy as a pig-pen.

CASE II.—On August 20th, Dr. A. C. Wright asked me to visit and see with him Mrs. M——, twenty-five years of age, wife of a railroad locomotive engineer, who had aborted the latter part of June, or about seven weeks before this date. She had almost daily hemorrhages, and was now in bed, quite prostrated from loss of blood. I felt fully assured that there must be some retained secundines, as she had been given medicinal treatment without avail. I advised a curetting operation, which was readily assented to. The patient was chloroformed, and placed in the Sims' posture on a kitchen table. The anterior lip of the cervix was seized with a vulsella forceps, and the uterus drawn in easy reach for manipulation. I dilated the cervix rapidly, and curetted carefully the uterus, removing a piece of retained placenta, which was firmly adherent to the upper right side. The cavity was then washed with a warm carbolized solution, about one quart. I cauterized with equal parts of pure carbolic acid and tincture of iodine, and placed an iodoform tampon against the cervix for forty-eight hours, to guard against the entrance of septic material into the womb. The patient was then placed in bed and given a hypodermic of one-half grain of morphine. I called during the two succeeding mornings with Dr. Wright, but found the patient without rise of temperature, or other systemic trouble. I then discontinued my visits. Five days after this, she ate something for supper which brought on acute congestion of the stomach, which came near ending her life: she recovered from this, however. In closing the history of this case I will state that she had no more hemorrhages after the operation, and is now menstruating regularly and normally.

CASE III.—On September 28th, I saw with Dr. A. C. Wright, Mrs. S——, twenty-seven years of age, wife of a printer, who said "she had aborted about the middle of June, and had not been well since." She was in bed and wasting with hemorrhage when I saw her. She also had been treated with drugs, without benefit. I advised mechanical interference. She gave her consent, and the following day I curetted the uterus under chloroform anæsthesia, preceded by rapid dilatation. I did not find any retained placenta, but removed a quantity of granulations and diseased mucous membrane; cauterized with carbolic acid and tincture of iodine; placed a tampon of cotton covered with vaseline and iodoform against the os, and left it for forty-eight hours, to guard against the entrance of septic material. This patient made a rapid and perfect recovery without febrile reaction or other bad symptoms, had no hemorrhage after the operation, and is now in good health.

CASE IV.—I was called on November 10th, to see Mrs. R——, twenty years of age, who had aborted in May. She had made, as she thought, a good recovery until menstruation began, when she found it lasted two weeks instead of five days, as was her habit before her pregnancy and abortion; from such irregular and excessive menstruation, her health failed, and she was now unable to do her housework. I gave it as my opinion that it would require an operation to relieve her, and she agreed to undergo a curetting. The next day was set for the operation, and under chloroform anæsthesia and with rapid dilatation, I did the work I have already described in Cases II. and III. I succeeded in removing only some hyperplasic membrane from the cavity of the womb. I also cauterized with carbolic acid and tincture of iodine, and tamponed the cervix with cotton, vaseline and iodoform. There was no febrile reaction, or other constitu-

tional trouble following the operation, but at the end of one or two weeks her wasting was as severe as before. As the patient was not willing for me to do a second operation, I then tried tamponing the vagina with absorbent wool, soaked in glycerine. These tampons were removed, the vagina washed out, and fresh ones replaced every other day for four weeks. They kept up a free watery discharge, but did not check the hemorrhage, which was more or less severe all the time. At the end of the month I abandoned this treatment, and obtained the patient's consent to do another operation. This was done similar to the former, though I was more careful to cauterize every part of the cavity. The cauterizing I repeated one week later, as there was still some wasting. Since then the patient has made a good recovery, and has menstruated regularly several times. She is now as well as she ever was and is doing her own work. This is the only case in which I found it necessary to repeat the operation in order to obtain a cure. I am now satisfied that one or two cauterizings at intervals of a week would have cured this case and obviated the necessity of the second operation. I have purposely omitted some of the minor details of treatment, as they are uninteresting, and were probably unnecessary.

I consider this the best method of treating such cases as I have described above, and am of the firm conviction that the operation is practically devoid of danger when done under the proper antiseptic precautions.

INTRA-ABDOMINAL HEMORRHAGE FROM EXTRA-UTERINE FETATION—EXPECTANT TREATMENT—RECOVERY.

By HARRIS WEINSTEIN, M.D.,

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I was called to see a young woman, who was suddenly taken with pain in the abdomen and recurring attacks of syncope. She presented a very weakened appearance, was exceedingly pale, and complained of dizziness and nausea, and slight pain in the lower part of the abdomen and lumbar region. The pulse was only faintly appreciable. I ordered the patient to bed, with head low, and administered large quantities of stimulants, but without avail.

Stimulation was kept up until the morning of the next day. During the night the pain disappeared, the intervals between the attacks of syncope became longer, and occasional vomiting began. Later in the day the fainting stopped, but she presented an alarming appearance. The surface of her body was cold and clammy, the features pinched and pointed; she could not raise her arm, and her voice was hardly audible. The abdomen became greatly distended and tympanitic on percussion, and the radial pulse was imperceptible. After having vomited several times in succession, the patient sank into a state of collapse. Dr. Boldt, who was called in consultation, diagnosed the case as intra-abdominal hemorrhage caused by rupture of the tube due to extra-uterine pregnancy or to tubal abortion. He ordered ice to the abdomen, hot drinks to check the vomiting, and injections of morphine and atropine repeated as necessary. For a few days the patient was hanging between life and death, but at last good nursing and her strong constitution triumphed. The radial pulse returned and all the other unpleasant symptoms disappeared, reactive fever set in, and afterward, by stimulation and nourishment, her strength returned.

The woman is twenty-three years of age, married nine months, had one abortion three months after marriage, and since had always been regular in her periods except the last time, when she missed, and was six weeks overdue at the time her severe illness began. On physical examination the uterus was found slightly enlarged and anterior; to the left of the uterus was a mass which was diagnosed to be the enlarged left Fallopian tube, with some perimetritis in its vicinity. One of the most interesting features in the case is, that on the sixth day after the first hemorrhage, a good-sized piece of decidua was passed, with a few drops of blood. The point in this case I want to call attention to is, how well patients in this condition will sometimes do, if you leave them alone and are not in a hurry to open the abdomen. I considered the question of a laparotomy with Dr. Boldt, but he thought it best to leave her alone, for the following reasons:

She was then in a state of collapse from the undoubtedly profuse intraperitoneal loss of blood. Her home surroundings were too unfavorable to undertake an operation of such nature, and it was thought dangerous to have her removed to the hospital in the condition in which she was. It was therefore concluded to be of greatest interest to the patient to wait until the collapse had subsided, and should sepsis develop she could then be removed and operated upon. The danger of another hemorrhage was not considered so great, because, from the result of the physical examination, Dr. Boldt thought that the embryo had in all probability already escaped completely into the abdomen.

164 HENRY STREET.

CIRCUMSCRIBING ERYSIPELAS.

By E. J. BEALL, M.D.,

FORT WORTH, TEX.

A short while since I was called to see an aged lady with facial erysipelas. The nose, cheeks, and eyelids were red, turgid, and painful; the temperature was 103° and pulse 120. She was somewhat delirious; the initiatory symptom was a cold stage.

This lady had an attack of erysipelas in New York some years ago, which confined her for a number of weeks, and her life was at the time despaired of. Later she had a similar seizure at one of the Virginia Springs.

In the recent attack I applied a strip of adhesive plaster ½ inch wide across the forehead, two other similar strips from the extremities of the forehead strip, extending across the temples downward to a point below the angle of the lower jaw. I covered the strip well with aristolized collodion. I did not apply the strip across the neck, as I have never seen erysipelas of the face and scalp cross the neck. Within this "pen" of plaster and collodion I applied frequently mentholated alcohol, thirty grains to two ounces. I gave nourishment, wine and citrate of iron and quinine. The fever gradually subsided, and on the fifth day the disease had terminated. The inflammation extended to the collodionized plaster, but did not cross it. Devices somewhat analogous to the preceding have been suggested and carried into practice by Fraske and others, but the agencies used were different from those described and carried into practical use by myself in above presented case.

Since the above case occurred another has fallen under my observation and treatment. Mr. C——, a former representative in the Legislature, suffered from an attack of facial erysipelas while in attendance on that body, and was treated by my friend, Dr. Wooten. I treated him in his last (recent) attack, which, so far as location of the disease was concerned, was analogous to that of the lady above mentioned, and I adopted practically the same line of treatment as in that case, using mentholated alcohol as the local treatment. Later in the disease, upon the appearance of blebs upon the eyebrows and cheeks, I substituted thirty per cent. ichthyol ointment for the mentholated alcohol. In the last case, as in the first, the disease extended to the plaster, but did not appear beyond it. In six days the patient recovered and resumed the duties of his profession.

Recent observations, which have determined that the micro-organisms of erysipelas are conveyed through the lymphatics, perhaps furnish us with the *rationale* of the treatment suggested.

MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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ABUSE OF THE MILK DIET IN ALBUMINURIA.

THE utility of milk as an article of diet, in the treatment of most forms of Bright's disease is generally accepted. But to treat every case of albuminuria by means of an exclusive milk diet would be unwise and irrational. Nevertheless, this is what many French physicians are in the habit of doing, if we may believe the statements of Drs. Lécorché and Talamon published in a recent number of *La Médecine Moderne*.

These authors very justly observe that it is not proper to condemn every albuminuric to a milk diet in perpetuity. Like every remedial agent milk has its limitations, indications, and contra-indications. An enforced and long-continued regimen of milk may become more formidable in its deleterious consequences than the albuminuria for which it was ordered. The authors present an array of facts and cases in support of this contention, which cannot be met by the theoretical assumption that milk ought to do good always. Nutrition, they have found, invariably suffers in the long run, even when four quarts per day are consumed. The authors describe as follows the status of a person who has subsisted for some time on milk alone: The face is pale, the muscles flaccid, there is an inability to perform brain-work, or to use the muscles for more than short periods. In a word, the vital energy is much reduced.

To most albuminurics, milk may be given as a medicine, but not as an exclusive article of food. It is not even known whether the milk albuminoids may not undergo the same toxic transformation in the human body as meat peptones. Certainly the gastric troubles that milk often produces, cannot be overlooked.

Milk, the authors admit, undoubtedly does good in the acute exacerbations of chronic nephritis, in what they call the "poussées aiguës hématuriques, albuminuriques, uriniques ou hydropiques." But one must know when to stop. Albumin does not disappear from the urine under milk treatment in chronic cases. In a ten days' or two weeks' course of exclusive milk treatment, all the good that can accrue is likely to have been accomplished. Above all, one must be careful not to induce the condition of "lacteal anemia."

We have reproduced the main line of argument of Drs. Talamon and Lécorché, because we believe they are right in assuming that even so apparently innocuous a measure as "a milk diet," should not be recommended in a hap-hazard and routine manner. But we doubt whether the warning is as much needed in our country as it would appear to be in France.

NEW YORK'S NEW HOSPITALS.

WORK has begun upon three large new hospitals in this city, and before long, a fourth will be commenced. They are the Post-Graduate Hospital, of which the building is already well under way; St. Luke's Hospital, whose corner stone was laid a week ago, and the Milbank Memorial Hospital, whose foundations are now being laid. This latter institution, which was at first described as only a pavilion addition to Roosevelt Hospital, is being constructed and will be run in great measure as an independent hospital. It is reported that Mt. Sinai Hospital will begin to build a new hospital before long.

When these various new structures are completed, they will form, taken in connection with the other institutions, a magnificent tribute to human philanthropy and medical science. No other city in the New World can compare in the extent, the palatial character, and the scientific completeness of its hospital buildings. New York may well be called the City of Magnificent Hospitals.

THE OPPORTUNITY FOR A GREAT PHILANTHROPY.

GOVERNOR FLOWER has vetoed the bill to establish an epileptic colony at Sonyea in this State. While much regret will be felt at this action, yet the reasons given for it are undeniably most cogent. He says in a memorandum filed with the veto:

"So great has been the demand in recent years from charitable associations and social reformers to extend the field of the State's activity in this direction that the number of these institutions has been largely multiplied and the capital invested has reached a stupendous sum. For the insane alone the State has established nine great hospitals at a cost of about $11,000,000, while the money invested in other institutions would probably reach at least nine millions more. The appropriations for charities at the present session of the Legislature have been the largest in the history of the State. They approximate over $4,200,000, of which $2,856,000 was for the insane, $240,000 for the deaf and dumb, $85,000 for the blind, $537,000 for youthful offenders, and $177,000 for idiots and feeble-minded persons. This is nearly half the total appropriations from the general fund by the Legislature. It is almost as much as the total State revenues from indirect sources, including the inheritance tax and taxes on corporations."

In addition to this some faults are found with the technical provisions of the bill.

The essential objection presented by the Governor is identical with that which was dwelt upon in the MEDICAL RECORD when the subject of colonizing epileptics was first broached. The scheme itself is most desirable and appeals very strongly to one's humanity, besides being an economical method of caring for this class. But it involves the assumption by the State of a new class of dependent persons. We already take care of the insane, the idiotic, the deaf and dumb and blind, the illegitimate, and the juvenile offenders. If we undertake the

care of the epileptics, we shall next have to care for the inebriates, then perhaps of the phthisical. It is difficult to see where the line could be drawn.

Here is an opportunity, now, however, for a magnificent private philanthropy. Some rich man might make himself immortal and confer a lasting benefit on mankind by purchasing the Sonyea property and organizing there a colony for epileptics. It could be done better in this way than by State aid, for the latter means politics, and the expense of not only caring for epileptics but of looking out for "the boys."

THE KEELEY CURE EXPOSED.

In the *Medical News* of May 6th, Dr. B. D. Evans, of Morris Plains, gives a good many interesting facts regarding the so-called Keeley cure. He quotes the following as being the medicines used:

1. The Tonic, or "Dope:" ℞. Aurii et sodii chlorid., gr. xij.; strych. nitr., gr. j.; atrop. sulph., gr. ¼; ammon. muriat., gr. v.; aloin, gr. j.; hydrastinin, gr. ij.; glycerine, ℥ j.; ext. fl. cinchonæ comp., ℥ iij.; ext. fl. coca erythrox., ℥ j.; aq. dest., ℥ j. 2. The "Shot," or Injection: ℞. Strych. nitr., gr. $9\frac{1}{10}$; aquæ dest., ℥ iv.; potass. perman., q. s. to color.

In addition to these two, an injection of a solution of chloride of gold and sodium is used to impress the patient, his attention being called to its rich golden color. Then comes the trick, the hypodermatic injection of apomorphine, which is given either with or as a substitute for the "shot" while the patient is allowed to drink whiskey.

He collects reports of 291 cases, among which were 158 relapses and 88 cases of insanity after treatment.

This is not a brilliant record and is very far from evidencing a sure cure. The charlatanry and commercialism connected with the business are well demonstrated by Dr. Evans. There is no use in denying, however, that the method, apart from this, is a good application of moral and medicinal therapeutics to the various conditions called inebriety. The atropia used is not a very poisonous or harmful drug, neither is strychnia in proper dosage.

The drugs and other agencies employed are none of them new, but they are ingeniously combined. As for the insanity following the cure, it is well known that insanity follows after alcoholism in a great many cases, and it is illogical to attribute it to strychnia and atropia rather than to the alcohol. It is the secrecy, the inhumanity, the indiscriminate dosing of all kinds of people simply for purposes of gain, that calls for reprobation.

THE REVIVAL OF PSYCHICAL RESEARCH.

There is a steady growth of interest in psychical and psychological matters in this country, as evidenced by the organization of special societies and the publication of articles upon these subjects. We noted recently the organization of a Psychical Society in Los Angeles, Cal. In our own city the Medico-Legal Society has given off a psychic branch, which it calls its Psychological Section. The American Psychical Society, whose head-quarters are in Boston, has sections in several other cities.

The daily press naturally makes some capital of these facts and furnishes its readers with the usual instalments of sensational phenomena. The New York *Herald* has published some marvellous cases of thought transferrence, the *Morning Journal* has described the experiments of its reporters with a gentleman who could read letters sealed up in envelopes, and who could even imitate the handwriting therein contained. A well-known prestidigitateur has recounted his experiences in India and given his endorsement to the miraculous gifts of the fakirs. It is but right to say that another eminent gentleman in the same line of business totally discredits them.

The greatest sensation of all, however, comes from Mr. W. T. Stead, of London, who contributes to *Light* an account of certain marvellous psychic phenomena observed by himself. He asserts that his own hand under certain circumstances writes automatically at the dictation of a distant person! He claims that this power is quite independent of distance, and concludes with the following:

"For the present my last word is this, that before many months are over I think it will admitted by every candid mind that the persistence of the individual after death, and the possibility of communicating with that individual, has been as well established on a scientific basis as any other fact in nature. That, you may think, is a bold assertion. It is not an assertion. It is a prophecy, based upon facts which are within my own knowledge, and of which I speak with as much confidence as I do of anything which has ever come within my own personal observation."

We shall await Mr. Stead's future announcement with great interest, and can only regret that all the really wonderful psychic phenomena reported come to us from such untrustworthy or erratic sources.

HEREDITARY SYPHILIS AND ITS RELATION TO NERVOUS DISEASES.

For some time past, Dr. A. Erlenmeyer has studied the relationship existing between congenital syphilis and certain nervous derangements. The results of his observations have been recently published in the *Zeitschrift für Klinische Medizin*, and are found to be somewhat at variance with commonly received views. The principal points made by the author are embodied in the following propositions:

Hereditary syphilis may remain latent in the system for over twelve years.

Among the exciting causes of latent congenital syphilis, which may call forth its active power, traumatism, the onset of puberty, and febrile affections are to be remembered.

The doctrine of Colles is not universally applicable, that is to say, mothers who give birth to syphilitic children may become infected, but are not bound to.

"Immune from syphilis" is by no means equivalent to "syphilitic."

The dogmatic assertion of Kassowitz is not founded on fact, for later born children may be more seriously affected than the earlier born ones.

Sex appears to have some influence in this disease. It has been observed that, if after the birth of a syphilitic infant a child of the opposite sex, but without syphilis, is born, it is not safe to conclude that the paternal syphilis

has become extinct, and that later children will be free from all symptoms.

The safest plan to insure healthy offspring is to subject both parents to antisyphilitic treatment.

There is a form of cerebral disease, accompanied by convulsions and unilateral arrest of development in children, which is generally due to syphilis.

The so-called cerebral paralysis of children is frequently due to syphilis.

Congenital epilepsy, with or without idiocy, is commonly the result of hereditary syphilis.

A perusal of these propositions may possibly give rise to an exaggerated idea of the far-reaching significance of congenital lues. Yet it is quite safe to say that the factor of syphilis enters into many obscure manifestations of early life, and of its importance in adults there has never been any doubt.

THE COMING MEETINGS.

From now till fall the medical profession is to be engaged in a dizzy whirl of society meetings, congresses, and various other congregations of a social, scientific, and political character. The Association of American Physicians leads off this month in Washington, and the different organizations of specialists meet soon after. In Chicago there will be a World's Auxiliary Congress, which begins in June, and in the same month occur the meetings of the American Medical Association, the American Academy of Medicine, the Association of American Medical Editors, and of American Medical Colleges. Later in the season come the Pan-American Medical Congress in Washington and the International Medical Congress at Rome.

After the medical man has taken in some of these gatherings and spent a couple of weeks at the World's Fair, he will feel quite like returning to the restful routine of active practice.

YELLOW AND BILIOUS FEVERS.

In almost all epidemics of yellow fever there occur a number of cases of disease in which the diagnosis rests in doubt, and which are variously reported as bilious, remittent, or yellow fever, according to the prejudices of the attending physician or of the sanitary authorities. There are physicians practising in all tropical countries—usually those who have migrated thither from temperate regions—who look upon every case of severe fever, not of a distinctly continuous type, as yellow fever; while others—and these are generally natives—are as loath to admit the existence of yellow fever in their locality as are certain practitioners in our own country to acknowledge the prevalence of malarial fevers in their own neighborhood. There is, however, no real justification for this confusion, for nearly all authorities on tropical diseases are in accord in the statement that, however closely these two affections resemble each other, they are, nevertheless, entirely distinct morbid entities, and are perfectly capable of being differentiated clinically by competent observers.

In a recent monograph, Dr. Domingos Freire, of Rio de Janeiro,[1] returns to this subject and seeks to demonstrate that the two diseases are distinct, bacteriologically as well as semeiologically. In typical cases the symptoms of the two diseases are so different that an error in diagnosis could hardly be made. Yellow fever presents three clearly marked stages, namely, an initial one of fever lasting from twenty-four to forty-eight hours, a second stage of apyrexia of variable but always brief duration, and a third period when the fever returns and the peculiar ataxo-adynamic, icteric, and hemorrhagic symptoms appear. In bilious fever, on the other hand, the fever is frankly intermittent or remittent, and the jaundice is present from the first. The characteristic facies of yellow fever, giving the patient the appearance of one intoxicated, is wholly absent in bilious fever. The vomiting is present from the beginning in bilious fever, and the ejecta are of a yellowish or more or less intense green, color; whereas in yellow fever the vomited matter is at first watery and later becomes black, and the vomiting does not cease, as in bilious fever, with the subsidence of pyrexia. In bilious fever the stools are of a yellow or green color, and there is diarrhœa often throughout the entire course of the disease, but in yellow fever constipation is the rule, diarrhœa coming on only toward the close. In yellow fever the liver and spleen are not enlarged, unless there have been previous attacks of malarial disease, but they became fatty degenerated; whereas in bilious fever hyperæmic enlargement is the rule, but fatty degeneration is absent. Finally, quinine modifies, and in favorable cases even cuts short, an attack of bilious fever, but has no favorable influence upon the course of yellow fever.

It is well known that Dr. Freire claims to have discovered a micrococcus which he regards as the specific organism of yellow fever, a claim which has, however, been disputed by others, notably by Dr. Sternberg, of the United States Army. He has now isolated from the urine, blood, and bile of patients with bilious fever a non-motile bacillus, nine micromillimetres in length and three micromillimetres in breadth, sometimes slightly curved, and staining readily by methyl-violet. These bacilli resemble closely, if they are not identical with, those found by Klebs and Tommasi-Crudeli in the blood of persons suffering from malarial fever. Segmentation of these bacilli occurs with great rapidity and each segment gives rise to a spore at one extremity. The bacilli are accompanied by a large number of mobile, highly refractive spores, ranging in size from one and a half to two micromillimetres, transparent like the bacilli, and surrounded by a luminous circular areola. Inoculation of guinea-pigs with cultures of these bacilli gave rise to a fever of remittent type, and examination of the organs after death showed the characteristic lesions of bilious remittent fever.

The author insists upon the differences found by him in the bacteriological study of those two diseases as of great importance in their differentiation, the micro-organism in one case being a bacillus, in the other a micrococcus. He concludes, therefore, that bilious and yellow fevers, however closely they may resemble each other superficially, are two entirely distinct diseases, whose differences may be demonstrated both clinically and bacteriologically. The importance of being able to make such a differentiation, appeals with equal force to the therapeutist and to the sanitarian, and it is to be hoped that the subject will receive full consideration during the coming Pan-American Congress.

[1] Sur l'Origine Bacterienne de la Fièvre Bilieuse des Pays Chauds, par le Dr. Domingos Freire. Rio de Janeiro, 1892.

THE PHYSICIAN IN PARLIAMENT.

There would seem to be no doubt, says *The Lancet*, that if Italy emerges clean and clear from the terrible financial imbroglio in which she is at present struggling, it will be chiefly due to the sagacity, energy, and independence of character displayed by a physician who is also a member of the Camera dei Deputati. Dr. Napoleone Colajanni, the physician referred to, is her "hero of the day." Two years ago he was appointed to the chair of Legal Medicine in Palermo, where his influence is felt in the field of criminal anthropology, on which he has written and lectured a great deal. His work has attracted attention far beyond the Italian frontier as at once sounder and deeper than that of Lombroso himself. At present he is the most conspicuous figure in his country's legislature, and has made his mark in quarters hitherto reserved for the professional expert in finance. He is by no means the first medical man to whom united Italy is indebted. It was Dr. Lanza, the "practitioner of Casella," who piloted her through an archipelago of political and international difficulties till she became mistress of Rome; it was the electro-physiologist Matteucci who, as Minister of Public Instruction, helped to enhance her medical teaching with Moleschott himself, now one of her senators; it was Baccelli—her leading consultant—who, holding the same portfolio, gave an impetus to archæological excavation which has increased tenfold the attractiveness of the Eternal City; it was Bertani, the Garibaldian surgeon, to whom Italy owes her "Codice Sanitario," which has already reduced her sick rate and her mortality; it is to Tommasi-Crudeli that she is indebted for the reclamation of the marsh lands and malarious districts now in progress and for whatever is most sound in her provisions against cholera visitations.

There is no other country which has so good a record in this respect as Italy. In England it has been considered bad form for doctors to enter public life, or emerge in any way from a scholastic seclusion. It is a favorite phrase of *The Lancet* that a doctor should lead "a quiet life." This attitude has done much to make the English physician politically a nonentity and socially only a grade above the butler. The tendency of the present, however, is to increase the importance of medical and sanitary matters in the social economy of the nation, and, while the "quiet life" of the past will be still followed by most of us, many physicians will recognize that they have public duties to perform as well as those which are professional and personal.

THE NEW CHIEF OF THE MEDICAL BUREAU OF THE NAVY.

The Secretary of the Navy has appointed Medical Inspector J. Rufus Tryon, Surgeon-General of the Navy, to succeed Surgeon-General John Mills Browne, who retired May 10th.

Surgeon-General Tryon was appointed to the navy September 22, 1863, from New York, as assistant surgeon, and has served successively in the grades of passed assistant surgeon, surgeon, and medical inspector. In receiving the promotion to Surgeon-General he skips the grade of medical director, of which there are fourteen on the active list.

We congratulate Dr. Tryon and wish him every success in his new office. He comes to the highest rank in his corps with an eminent fitness for the discharge of its responsible duties, and will demonstrate what an energetic, experienced, and capable man can do in the way of enlarging the scope of his bureau and of developing its possibilities.

News of the Week.

Annual Dinner of Alumni Association of St. Luke's Hospital, New York.—The annual dinner of the Alumni Association of St. Luke's Hospital was held at Hotel Savoy on the evening of May 8, 1893. Dr. A. A. Davis, the president of the association, after a brief address introduced the toastmaster, Dr. Robert Abbe. The following were the regular toasts and respondents: St. Luke's Hospital, Mr. Charles Russell, a member of the Board of Managers. The Executive, Rev. George S. Baker, D.D. The Alumni Association of New York Hospital, Dr. George F. Shrady. The Alumni Association of Charity Hospital, Dr. D. Bryson Delavan. The Medical Board, Dr. L. Bolton Bangs, and the ex-Interne, Dr. William K. Otis.

Medical Advertising.—Under the head of successful medical advertising a reporter of that very bright piece of news, "Printers' Ink," tells of his interview with the advertising manager of a medical institute. This manager spent over $400,000 in advertising last year and the volume of business done was something over one million. This manager says that the younger generation of the medical profession is recognizing "the folly of that absurd barrier against advertising which the ethical code raised up." He says: "There will not be a trace of it left."—*National Medical Review.*

Dr. F. P. Kinnicutt.—We are glad to learn as we go to press that Dr. Kinnicutt, who has been operated upon for appendicitis, is doing well and is practically free from danger.

The Leprosy Commission of India has just made its report and it has reached the following conclusions: "1. Leprosy is a disease *sui generis*: it is not a form of syphilis or tuberculosis, but has striking etiological analogies with the latter. 2. Leprosy is not diffused by hereditary transmission, and for this reason, and the established amount of sterility among lepers, the disease has a natural tendency to die out. 3. Though in a scientific classification of diseases leprosy must be regarded as contagious, and also inoculable, yet the extent to which it is propagated by these means is exceedingly small. 4. Leprosy is not directly originated by the use of any particular article of food, nor by any climatic or telluric conditions, nor by insanitary surroundings; neither does it peculiarly affect any race or caste. 5. Leprosy is indirectly influenced by insanitary surroundings, such as poverty, bad food or deficient drainage or ventilation, for these by causing a predisposition increase the susceptibility of the individual to the disease. 6. Leprosy in the great majority of cases originates *de novo*, that is, from a sequence or concurrence of causes and conditions, dealt with in the

report, and which are related to each other in ways at present imperfectly known." This is all about in accordance with what was already known except the last conclusion. This is a most weird and extraordinary conclusion for a body of scientific men to make at the present day. A statement that leprosy or any other infectious disease arises *de novo* is simply silly.

What Becomes of Medical Graduates in the United States.—We lately noticed the fact that after a medical education, in many cases not exceeding eighteen months in duration, over 4,000 medical graduates are turned out of the medical schools of the United States. It is almost satisfactory to learn from a correspondent in the *Medical Age* that a large proportion of these fall out of the profession, or rather never really get into it. The writer traced after graduation 100 of his friends, especially in the first five years, and found that 75 had to resort to other employment; 23 received a salary either additional to practice or separate therefrom; 15 became proprietors of drug stores; 3 were insurance agents; 4 "loaned money;" 1 sold real estate; 1 was an agent for drugs; 1 an agent for books; 1 dealt in patent medicines; 2 were farmers; 1 a manufacturer; 2 gave massage treatment; 1 sawed wood, and subsequently suicided (*sic*); 12 gave up in disgust, and 1 never tried to practise at all—29 graduates only in 100 devoted themselves to medicine, of whom 11 associated themselves with other practitioners, and in some cases succeeded to their practice.—*Lancet.*

To Get Rid of the Smell of Iodoform, Creosote, or Guiacol.—To free the hands from the smell of iodoform, creosote, or guiacol, wash them with water in which linseed meal has been boiled and drained off. Objects smelling of iodoform should be washed in tar water to which has been added some essence of wintergreen. Rooms smelling of creosote or iodoform can be deodorized by burning coffee-berries in them. Pills of creosote over which freshly ground coffee has been sprinkled, lose their disagreeable odor.—*Deutsche Med. Zeit.*

The Third Congress of American Physicians and Surgeons will be held at Washington, beginning on the last Tuesday in May, 1894. The selection of societies to prepare programmes for the general meetings was made alphabetically, as follows: 1, Anatomists; 2, Climatologists; 3, Dermatologists; 4, Genito-urinary; 5, Gynecologists; 6, Laryngologists; 7, Neurologists.

The Fourth Annual Session of the Association of American Medical Colleges will occur at the Pfister Hotel, Milwaukee, Wis., at 3 P.M., Wednesday, June 7, 1893. The following amendment to the By-laws will be suggested, to wit: First. Granting associate membership of one delegate to each recognized school of post-graduate instruction in the United States. Second. Granting associate membership of one delegate from each State board of medical examiners in the United States. Third. By dividing the membership into three classes, to wit: Active, associate, and honorary.

Papers.—"Methods of the Manual Training in Medical Instruction," by E. L. Holmes, M.D., LL.D., Chicago, Ill. Discussion opened by Victor C. Vaughn, A.M., M.D., Ann Arbor, Mich. "To what Extent Should the Specialties be Taught in Regular Course?" by Dudley S. Reynolds, A.M., M.D., Louisville, Ky. Discussion opened by A. Vander Veer, Albany, N. Y. "Report of Committee on a System of Uniform College Certificates," by Professor Victor C. Vaughn, Bayard Holmes, and Perry H. Millard. "Report on a System of Laboratory Book-keeping," by Bayard Holmes, B.S., M.D., Chicago, Ill.

PERRY H. MILLARD, *Secretary.*

Bellevue Hospital Medical College, New York.—At the annual meeting of the Faculty of Bellevue Hospital Medical College, May 2, 1893, the following changes and appointments were made:

The title of the chair of Dr. H. M. Biggs was made—Materia Medica and Therapeutics, Diseases of the Nervous System, and Clinical Medicine.

The title of the chair of Dr. H. D. Noyes was made—Ophthalmology, instead of Ophthalmology and Otology.

The title of the chair of Dr. Samuel Alexander was made—Genito-urinary Surgery and Syphilis.

The title of the chair of Dr. P. K. Dunham was made—Pathological Anatomy, Bacteriology, and Hygiene.

Dr. Edward Bradford Dench was appointed Professor of Otology for the regular session.

Dr. John A. Fordyce was appointed Professor of Dermatology and Syphilology for the regular session.

Dr. David H. McAlpin, Jr., was appointed Professor of Histology and Demonstrator of Pathological Anatomy for the regular session.

Dr. Austin Flint, Jr., was appointed adjunct Professor of Obstetrics for the regular session.

Correction.—Dr. Erskine B. Fullerton, of Columbus, O., writes: Foot-note, page 523, MEDICAL RECORD of April 29, 1893, referring to Gynecology of Dr. Thos. W. Gordon, should be erased.

Death of John Halsey Hunt, of Port Jervis, N. Y.—The following resolutions were passed at the last meeting of the Society of the Alumni of Bellevue Hospital:

"*Whereas*, Our associate, Dr. John H. Hunt, has been removed by an untimely death from the activities and usefulness of his profession, we, his co-laborers in Bellevue Hospital, New York City, desire to give expression to our personal regard for his many estimable qualities as a man, our appreciation of him as a friend, and our sincere regret that in his decease our profession has lost an ardent, conscientious, and experienced practitioner.

"Dr. Hunt's amiable qualities and medical acumen won him honored consideration while a fellow-worker on the Hospital Staff; his laborious efforts in his professional life have secured for him reputation and regard.

"In his death we desire to reiterate our sense of personal and professional loss, and to his family and friends give fitting testimonial of our sorrow and sympathy.

L. BOLTON BANGS,
T. H. BURCHARD,
R. A. MURRAY,
Committee."

The Pan-American Medical Congress—Official Bulletin.—The Executive Committee of the First Pan-American Medical Congress promulgates the following information:

1. The First Pan-American Medical Congress will be opened under the Presidency of Professor William Pepper, M.D., LL.D., President of the University of Pennsylvania, at Washington, D.C., September 5, and will adjourn September 8, 1893.

2. The countries officially participating in the Congress are restricted to the Argentine Republic, Bolivia, Brazil, British North America, British West Indies (including British Honduras), Chile, Dominican Republic, Spanish Honduras, Mexico, Nicaragua, Paraguay, Peru, Salvador, Republic of Columbia, Republic of Costa Rica, Ecuador, Guatemala, Hayti, Kingdom of Hawaii, Spanish West Indies, United States, Uruguay, Venezuela, Danish, Dutch, and French West Indies.

Distinguished representatives of the profession from other countries are expected to be present as guests, and to participate in the proceedings.

3. The general sessions will be limited in number, one for opening and one for closing the Congress, being all that will be held unless some necessity arises for a change in this particular. This arrangement will permit members to employ all of the time in the scientific work of the sections, which are as follows: (1) General Medicine, (2) General Surgery, (3) Military Medicine and Surgery, (4) Obstetrics, (5) Gynecology and Abdominal Surgery, (6) Therapeutics, (7) Anatomy, (8) Physiology, (9) Diseases of Children, (10) Pathology, (11) Ophthalmology, (12) Laryngology and Rhinology, (13) Otology, (14) Dermatology and Syphilography, (15) General Hygiene and Demography, (16) Marine Hygiene and Quarantine, (17) Orthopædic Surgery, (18) Diseases of the Mind and Nervous System, (19) Oral and Dental Surgery, (20) Medical Pedagogics, (21) Medical Jurisprudence, (22) Railway Surgery.

The evenings will be devoted entirely to social features, the detailed announcements of which will be made by the Committee of Arrangements.

4. Membership is limited to the members of the medical profession of the Western Hemisphere, including the West Indies and Hawaii, who shall either register at the meeting or shall serve the Congress in the capacity of foreign officers. No membership fee will be accepted from any member residing outside the United States. The membership fee for residents of the United States is $10. All registered members will receive a copy of the Transactions. Prominent students of the allied sciences will be cordially received as guests and as contributors to the proceedings upon invitation by the Executive Presidents of sections. Ladies' tickets will be issued upon application to registered members only, and will entitle the holders to reduced fare and to admission to all entertainments. Physicians of the United States should register at once, by remitting $10 to Dr. A. M. Owen, Treasurer, Evansville, Ind.

5. Papers are solicited, the hope being entertained that the programme will be largely taken up with contributions from outside the United States. Papers may be read in any language, but a copy must be furnished for publication in either Spanish, Portuguese, French, or English, and must not occupy more than twenty minutes in reading. An abstract not exceeding six hundred words, must be furnished the Secretary-General in one of the above four languages, by not later than July 10th. Abstracts will then be translated by the Literary Bureau into the three remaining languages, and will be published in book form before the meeting of the Congress.

6. The Congress of the United States has adopted a joint resolution whereby all the Governments of the Western Hemisphere have been invited by the President to send delegates to the First Pan-American Medical Congress, and has appropriated a liberal sum for the purposes of entertainment.

7. The reduced fare offered by all transportation companies on the occasion of the World's Columbian Exposition to be held in Chicago, will be open to all persons attending the Pan-American Medical Congress. The Committee of Arrangements will endeavor to secure still greater reduction to members travelling between Chicago and Washington, and an effort will be made to arrange either excursions or circular tours for those who may desire to visit the great universities of the United States. All such arrangements are open to subsequent announcement.

8. By arrangement with the Committee at Rome, the date of the Eleventh International Medical Congress has been so appointed that those who attend the meeting of the Pan-American Medical Congress may subsequently attend the former. The Pan-American Medical Congress will adjourn on the afternoon of September 8th; a steamship will sail from New York on the following day, going by the Azores and Gibraltar, and enabling the tourist to reach Rome on the morning of September 20th, where the Eleventh International Congress will be opened on the afternoon of September 24th. It will thus be seen at a glance, that in the period usually allotted to a summer vacation, the medical tourist may spend a week at the World's Columbian Exposition, the next week at the Pan-American Medical Congress, the next week-and-a-half with delightful companions in a voyage to the Mediterranean, the next few days in witnessing the sights of Rome, and the following week at the Eleventh International Medical Congress. Special reduced rates for members and their families are given both ways on the trip to Rome, particulars of which will be furnished on application to the Secretary-General, 311 Elm Street, Cincinnati, O., who is also a member of the American Committee of the Eleventh International Congress.

9. The best possible arrangements will be made with the excellent hotels with which the National Capital is abundantly supplied. The Committee of Arrangements will do its utmost to secure desirable rates and locations for members and their families. The headquarters of the Committee of Arrangements is at the Arlington Hotel, where communications may be addressed either to Dr. Samuel S. Adams, Chairman, or Dr. J. R. Wellington, Secretary.

10. Copies of the Official Announcement of the Congress, containing the regulations and names of all officers and committeemen of the General Congress and of the various sections, and residing in the various countries, may be obtained upon application to the Secretary-General, or to either of the members of the International Executive Committee, as follows:

Argentine Republic, Dr. Pedro Lagleyze, Calle Artes 46, Buenos Aires; Bolivia, Dr. Emilio di Tomassi, Calle Ayacucho 26, La Paz; British West Indies, Dr. James A. De Wolf, Port of Spain; British North America, Dr. James F. W. Ross, 481 Sherborne Street, Toronto; Chili, Dr. Moises Amaral, Facultad de Medicina, Santiago; Costa Rica, Dr. Daniel Nuñez, San José; Dominican Republic, Dr. Julio Leon, Santo Domingo; Ecuador, Dr. Ricardo Cucalon, Guayaquil; Guatemala, Dr. Jose Monteros, Avenida Sur No. 8, Guatemala City; Hayti,

Dr. T. Lamothe, Rue du Centre, Port au Prince; Hawaii, Dr. John A. McGrew, Honolulu; Spanish Honduras, Dr. George Bernhardt, Tegucigalpa; Mexico, Dr. Tomás Noriega, Hospital de Jesus, Mexico; Nicaragua, Dr. J. I. Urtecho, Calle Real, Granada; Paraguay ——; Peru, Dr. Manuel C. Barrios, Facultad de Medicina, Lima; Republic of Colombia, Dr. P. M. Ibañez, Calle 5a Número 99, Bogota; Salvador, Dr. David J. Guzman, San Salvador; Spanish West Indies, Dr. Juan Santos Fernandez, Calle Reina No. 92, Havana; United States of America, Dr. A. Vander Veer, 28 Eagle Street, Albany, N. Y.; United States of Brazil, Dr. Carlos Costa, Rua Largo da Misericordia 7, Rio de Janeiro; Uruguay, Dr. Jacinto de Leon, Calle de Florida No. 65, Montevideo; Venezuela, Dr. Elias Rodriguez, Caracas.

CHARLES A. L. REED, *Secretary-General.*

Government Appropriation for the Congress: Early in the last session of Congress, the Secretary of the Treasury and the Secretary of State, jointly, recommended that an item be inserted in the Sundry Civil Bill, appropriating $15,000 for the entertainment of the Pan-American Medical Congress. The item was rejected by the House Committee on Ways and Means, but was reintroduced in the Conference Committee by Senator Gorman, under whose championship it was agreed to and became a law.

Governmental Delegates to the Congress: The United States Minister to Ecuador transmits information through the Department of State, that Dr. Ricardo Cucalon, of Guayaquil, has been appointed one of the delegates for that country to the Congress.

The United States *Chargé d'Affaires* at Petropolis, has notified the Department that the Government of Brazil has accepted our invitation to take part in the Congress, and has appointed Dr. J. Baptista da Lacerda, of Rio de Janeiro, one of the delegates thereto.

The Mexican Legation at Washington furnishes information that Dr. Fernando López, Surgeon-General of the Mexican Army, has been appointed one of the delegates to represent the Government of Mexico.

The Government of the United States of Columbia has appointed Dr. Pio Rengifo official delegate to the Congress from that country.

A Buffalo Hospital Staff Resigns.—The attending and consulting staffs of the Buffalo City Hospital have resigned as a body. The reason assigned for this action is, that the doctors tried to make it a private institution for the public gain, whereas the management persisted in making it a public institution for private gain.—*Buffalo Medical and Surgical Journal.*

The American Pediatric Society will hold its Fifth Annual Meeting at West Point, New York, May 24, 25, and 26, 1893.

Death Under Ether.—The *British Medical Journal* has received the following account of a death during the administration of ether by Mr. Arthur Chilcott, Assistant Medical Officer at St. Mary Abbots Infirmary: The patient, a man, aged fifty-six, was admitted into the infirmary suffering from laryngeal obstruction, which subsequently necessitated tracheotomy. Ether was administered by means of Clover's inhaler, the indicator never being turned beyond No. 1. The pulse improved at first, but after from four to five minutes it became weaker and slower, the anæsthetic was discontinued, but the heart's action ceased; respiration occurred after the pulse had ceased, there were no signs of asphyxia, and the countenance was pale. The medical superintendent did not perform the operation, as the symptoms pointed to syncope rather than to asphyxia. Every means, including galvanism, artificial respiration, and subcutaneous injection of ether were tried, but in vain. At the post-mortem examination the heart was found to be pale, enlarged, and flabby, showing signs of fatty degeneration There was some dilatation and considerable atheroma of the thoracic aorta, the larynx was œdematous; all other organs were healthy. In consequence of the patient being very nervous and difficult to manage a general anæsthetic was considered desirable, as distinguished from a local one—for example, cocaine; and having regard to the weak condition of the heart ether was chosen in preference to chloroform. The case is at once interesting and obscure in that death occurred during the inhalation of ether, apparently from syncope.

A Doctor Who Took Medicine.—The *Bristol Medico-Chirurgical Journal* contains a graphic account by Dr. Kent Spender of a serious illness, which appears to have been a kind of rheumatic meningitis affecting the upper vertebræ. At the outset the doctor prescribed for himself and took the somewhat heroic dose of one ounce of salicin in ten hours. He remarks, "This audacity of medication meant that the patient was in a fighting temper—a temper begotten by the feeling that possibly death and physic were in mortal combat." In the same number there is a case of extra-uterine gestation operated upon successfully by Dr. Aust Lawrence.

Cold Water in Berlin.—Pfarrer Kneipp, the cold water apostle of Wörishoffen, has been lecturing to crowded and fashionable audiences in Berlin. He began by saying that he knew nothing of medicine; why should he, when no such knowledge is needed for healing the sick; and went on to tell of "wonderful cures" performed by the help of bucketfuls of cold water, and barefooted walking through wet grass. This is not astonishing, for Pfarrer Kneipp, with his portly figure, his good-humored Suabian dialect, and biblical simplicity of language, is decidedly an interesting type; what seems more serious is the fact that a sanitarium for "Kneipp's Cure" has been opened in the best part of Berlin.—*British Medical Journal.*

A Chinese Quack who recently died in San Francisco is reported to have had a practice of $45,000 a year, and to have died finally of his own specialty—asthma.

An American Medical Lord.—It may not be generally known that the eleventh Lord Fairfax—or more strictly speaking, the gentleman who would be known by that style and title if he were a resident in the land of his forbears—is a citizen of the United States. He lives near Washington, and is a member of the medical profession, though we believe he does not practice. In the seventeenth century a branch of the Fairfax family settled in America, having obtained a grant of some six million acres of land on the Potomac. This estate derives a certain historic interest from the fact that it was surveyed by no less a person than George Washington, who seems to have been connected by marriage with the Fairfax family.—*British Medical Journal.*

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE APPROACH OF CHOLERA—SMALL-POX—INFLUENZA—FEBRILE REACTION AFTER HEMORRHAGE—SUPPURATING BUBO WITH HEMORRHAGE—GASTRO-ENTEROSTOMY—HEREDITARY ENLARGEMENT OF THE SPLEEN—ABDOMINAL SECTION FOR RUPTURED SPLEEN—ACUTE DISLOCATION OF THE KIDNEY—PROFESSOR MACNAMARA—LADY LISTER.

LONDON, May 3, 1893.

CHOLERA still threatens us as the epidemic in France becomes more established. At Lorient and the neighborhood from the 10th of March to the 31st there had been 288 cases and 112 deaths. By the 9th of April these figures had risen to 476 and 178. Since then the disease has extended, and although the authorities are very reticent there is no doubt that several fresh towns have been infected, and the probability increases that there will be very serious outbreaks over Western Europe. Our sanitary authorities seem to be alive to the danger, and are confident that all precautions have been taken. A very suspicious case has occurred on the Tyne, and was promptly investigated. Happily it proved not to be cholera.

Small-pox is still on the increase in various localities. In London last week the number of cases notified rose to 154. In the previous week there were 99 cases. In the hospital ships we have above 400 under treatment. The London cases are distributed in many districts.

Influenza is also still prevalent. There were forty-two deaths from this disease last week, being two less than the prior week; but in this disease the deaths scarcely give an idea of the prevalence as so many recover from even severe attacks, and the milder attacks are innumerable. Many of these greatly debilitate the patients and so lead to other diseases.

Febrile reaction after hemorrhage has probably been observed by most practitioners. On Monday last (the 17th) this subject was brought before the Medical Society of London by Dr. M. Handfield Jones. As an eminent obstetrician and gynecologist his illustrations were naturally drawn chiefly from this department, and he asked what was the experience of surgeons. In his paper, which was entitled "Pyrexia in Acute Anæmia," he related cases of rise in temperature lasting eight or ten days without disturbance of lochial or milk secretion, which had followed hemorrhage in pregnancy or at delivery. The rise in temperature came on very soon after the bleeding, before there was time for septic mischief, and subsided without further complication. Pyrexia had also been seen after loss of blood from curetting for fungous endometritis, from dilatation for removing submucous fibroids and from operations for hæmorrhoids. The reaction mostly occurred in women of nervous temperament, and it is by no means easy to diagnose between cases due to loss of blood and those due to the cause of the hemorrhage. Dr. Bristowe said he had noticed the same thing after hemorrhage from gastric ulcer. The surgeons did not offer the contributions to the subject that might be anticipated. Mr. Shield communicated to the same meeting two cases of severe hemorrhage from the sac of suppurating bubo. The bleeding appeared to be from a branch of the femoral, the sheath of which was bare at the bottom of the abscess cavity. By prolonged pressure, including elastic bandage from the foot upward and packing the sac, he had succeeded without resorting to ligature of the trunk, and he urged that before performing so grave an operation this plan should be thoroughly tried.

On Friday (14th inst.) Mr. Herbert Allingham related at the Clinical Society a case of gastro-enterostomy which he had performed on a woman, thirty-four years of age. She vomited after all food, was emaciated, and there was a hard mass in the epigastrium. Senn's plates were used. The mass about the pylorus was malignant and involved too much of the stomach-wall for removal, but the operation relieved the patient, who gained in weight and lived five months, and then succumbed to secondary deposit in the lungs. Mr. Battle mentioned a case equally relieved for about four months. Mr. Pearce Gould remarked on the necessity of being sure that it was the upper part of the jejunum that was attached to the stomach and the possibility of making a mistake in this respect. Also as to the propriety of turning the intestine so that its peristalsis might run parallel to that of the stomach; as neglect of this precaution had been said to lead to regurgitation. Mr. Gould also discussed the effect of decubitus in producing regurgitation, and said that at the recent French Surgical Congress one surgeon urged that the operation should be done at the back of the stomach, as when done anteriorly the passage of the contents of the stomach into the jejunum ceased on the dorsal decubitus, but it seemed strange that the stomach could not force its contents through the opening. Mr. Moullin said he performed the operation six weeks ago; and the patient did well, but was troubled about once a day with regurgitation of bile into the stomach, which caused vomiting, after which he could take his food. There was marked atrophy of the walls, which perhaps accounted for the inability of the stomach to resist backward pressure. Mr. Barker said he had operated three times, with one death. In one case there was regurgitation, but this ceased when the patient was raised into the semi-sitting posture. He insisted that the bowel should be secured for some distance along the proximal, as well as the distal, end to prevent kinking.

Hereditary enlargement of the spleen was brought before the Clinical Society by a communication of Drs. Wilson and Stanley, giving the sequel of some cases contributed by them in 1890. The cases were all in adults; all had enlarged spleen without enlargement of glands, and all had marked globular anæmia without leucocytosis. In some there had been fits of epistaxis; in some febrile attacks with apparently active destruction of red corpuscles. Dr. Barlow had had an opportunity of seeing several members of the family, and said the cases differed from ordinary splenic enlargement and the hereditary character was a novel feature. The keynote of the group was a combination of positive and negative characters and its occurring in paroxysms.

Abdominal section for subcutaneous rupture of the spleen was then brought forward in a paper by Mr. Battle, who gave full details of a case in which he had operated twenty-six hours after the accident, which was falling through a skylight about fifteen feet high. The man had walked to the hospital, about half a mile, without assistance. He had pain in the lower ribs, the tenth was broken. Evidence of internal hemorrhage appeared later and transfusion of saline fluid improved the appearance and laparotomy was done. Much blood and clots—seventy-five ounces being measured — were removed from the abdomen. A laceration of the spleen was found, and with no little difficulty the splenic vessels were ligatured and the abdomen irrigated. A glass drainage-tube was employed. Saline transfusion was repeated, and the next day he was wonderfully well, with a temperature of 99° F. at 9 A.M. Peritonitis, however, afterward set in, and was fatal on the sixth day after the injury.

Acute dislocation of the kidney was the subject of the paper at the last meeting of the Medical and Chirurgical Society. The paper dealt with cases in which acute paroxysms, resembling those of renal colic, supervened, usually on violent exertion. Sometimes the kidney could be felt distended, but not much, because it is in the early stage of hydronephrotic tumor that such attacks occur. Later on, movement being less limited, there was less pain. Dislocation was the term adopted, as in some cases reduction took place with or without an anæsthetic, and the pain at once ceased. In the discussion that followed some speakers found "movable" or "floating" kidney very rare. Others thought it was much more frequent. Sir Andrew Clark said that in four thousand autopsies

he had made he had only met two cases, and Dr. Norman Moore said he had only found two cases so movable that they could have been recognized during life. Mr. Lucas suggested that as many patients were lying on their backs for a considerable time before death, the kidney might gravitate to its place and be fixed by the consolidation of the fat after death. Some undoubted cases treated by operation were related, and a suggestion was made that many cases might become mitigated and so not require surgical interference.

Rawdon Macnamara, of Dublin, was well-known in London, and during the meetings of the General Medical Council, in which he represented the Dublin College of Surgeons, his friends here were glad to enjoy his genial company. In America, too, his name will be familiar as the editor of Neligan's "Medicines: Their Uses and Modes of Administration." Although a hospital surgeon, he was also a Professor of Materia Medica, a subject usually consigned to physicians; but he achieved distinction in both departments, was a most delightful companion, an accomplished linguist, and an eloquent speaker. He died on the 12th instant, lamented by a host of friends and universally regretted.

Sir Joseph Lister has lost his wife, while travelling in Italy. Lady Lister was the daughter of Syme, and so identified, as it were, all her life with surgery, and has died of acute pneumonia.

SUPPRESSION OF URINE FOR LONG PERIODS.

To the Editor of the Medical Record.

Sir: In your issue of April 22d Dr. Philip Frank O'Hanlon reports a ten-day case of anuria. He says:

"I fail to find any case like this in any of the books. I never heard anyone whom I had spoken to on the subject who had seen or heard of any living being going ten days without voiding urine and then dying with as much ease and peace as one would go to sleep."

A work entitled "Suppression of Urine," published by William Wood & Co., 1881, contains minute descriptions and analyses of ninety-three cases of anuria, varying in duration from three to sixty days, necropsies having been made in more than half the number.

Some of the instances are, perhaps, more remarkable than Dr. O'Hanlon's case in respect of mode of death as in general absence of symptoms; many of them, instead of dying, recovered after twelve to twenty-five or more days of complete anuria and with few symptoms of illness.

Particularly interesting in connection with Dr. O'Hanlon's report are cases in the book under Nos. 17, 19, 21, 23, 36, 43, 47, 52, 58, 59, 79, 80, 82, 83. Of the entire ninety-three cases recorded in the book referred to, it will be observed that only nineteen presented uræmic symptoms, and three of these only after the flow of water had been fully re established.

A very scanty and mild degree of symptoms seem to have oftener accompanied those cases in which there was a long duration of anuria followed by recovery (lasting twenty-five, twenty-one, twenty-one, twenty-five, twenty-eight days). Contrary to the general idea, retention of water would seem to be more conducive to uræmia than does suppression.

E. P. Fowler, M.D.

RED CROSS PARK.

To the Editor of the Medical Record.

Sir: Permit me to call to your notice the fact that the article in the Medical Record of April 15th, p. 467, entitled "Billroth and the Good Samaritans," has already been anticipated by "The American Amendment," in the articles of adhesion by which this country became signatory to "The Geneva Treaty of the International Red Cross." When this treaty was under discussion, Miss Clara Barton, with that prudential foresight that she possesses in such a wonderful degree, told the assembly of delegates that the United States, owing to geographical isolation, were not very liable to be involved in a foreign war; hence, in order to maintain her National Association of the Red Cross in a state of efficiency it would be necessary to be allowed to render relief-services in great calamities other than war. This amendment, after ample discussion, was unanimously concurred in; and since then several other signatory nations have added the same provision to their constitutions. After fourteen crucial tests in fires, floods, earthquakes, famines, and pestilences, this provision has been so satisfactory that one of its members—one of our own profession, who with his wife witnessed its workings at Johnstown during five months following the flood—donated seven hundred and eighty-two acres of valuable land near the centre of population of the United States, "as a thank-offering to humanity," to be held by Miss Barton and her successors forever, as a place for the accumulation of stores, and for such other benevolent, educational, or humanitarian purposes as may be found to be demanded in the carrying out of "The American Amendment."

The writer has been advised that this tract of land is being rapidly put into an advanced state of cultivation; and that barns and storerooms are being provided for the accumulation of such articles as would be of most utility in great calamities.

Miss Barton has given the best years of her life to the relief of human suffering; and The American National Red Cross is now, in its perfected organization, preparing to emerge from a state of self-imposed retirement into the broad light of an international day, where the whole world may judge it by its works.

The medical profession are always foremost in humane work, and the writer has no doubt but the American National Red Cross will afford all necessary scope to such as have larger aims than local aid.

Respectfully,
Medicus.

Bedford, Ind., April 17, 1893.

New Instruments.

THE SMALL CATARACT KNIFE.

By JOHN DUNN, M.D.,
Richmond, Va.

The small cataract knife made for me by Messrs. Bartlett, Garrens & Co., of this city, and of which the accompanying cut represents the full size and appearance of the

blade, has, for the purposes mentioned below, certain advantages over the full size Graefe knife, which may make its mention worth while. The full length of the blade is 22 mm., that of the usual Graefe knife being 30 mm. Unlike the Graefe knife the blade tapers very gradually from the hilt to the point, so that the point is very fine; the blade is much thinner than the usual French make of the Graefe knife; the point is made double-edged so that it will cut on entering and re-entering the cornea with the least possible external force. It may be used in the following cases advantageously: In making corneal sections for the purpose of iridectomy, wherever the anterior chamber is very shallow, as in glaucoma, or where there are adhesions of the iris to the lens or to the cornea. In the latter case it will often be found possible to make with this knife a much larger iridectomy than could be obtained with the triangular-shaped knife. It is also useful where we wish to obtain an artificial pupil, when, owing to the presence of dense central leucoma, we are unable to use the triangular knife. It makes an accurate corneal section, and the blade is always in sight. Owing to the thinness of the blade and the shape of the point the corneal section can be made

as close as desirable to the scleral margin. It has also its advantages in making the corneal section in cases of glaucoma, where, owing to the tension, the pain in the ball is so great that it cannot be grasped with the forceps and thus steadied. The section can often then be made simply by steadying the ball with the knife as the section is being made. Its double edge makes it advantageous in making corneal sections in those cases where the tension of the ball has been much lowered, *e.g.*, where capsalectomy is done immediately following a failure to obtain an opening, likely to be permanent by the usual needle operation for secondary cataract. It also may be used to open the chamber in certain cases for the purpose of drainage: for the removal of gumma of the iris; to remove foreign bodies from the iris, etc. It makes a small, clean corneal section.

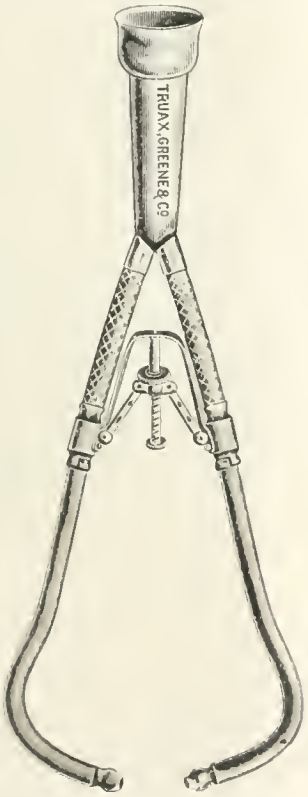
A NEW STETHOSCOPE.

By WILLIAM H. BURT, M.D.,

CHICAGO, ILL.

I wish to call the attention of the profession to a new stethoscope recently devised by me and found, after an impartial test, to be the best transmitter of sound that has, up to date, been placed before the medical world.

Metal tubing is a far better transmitter of sound than rubber, in fact, rubber is one of the poorest substances we have to transmit sound, and as this instrument is made entirely of metal, it possesses a marked advantage over hard rubber stethoscopes similarly constructed. The bell of the instrument is a metal cylinder four inches long, the internal diameter at the base or mouth is one and a quarter inch, and can be made any size desired, being nearly as large again as any other stethoscope on the market. The cylinder tapers gradually to its apex, where it measures three-quarters of an inch in diameter. From this point there are two openings five-sixteenths of an inch in diameter, which form the attachments of the ear-tubes, and this same inside diameter is continued the full length of the ear-pieces to the ear. A removable soft rubber cup is attached to the base of the metal cylinder which enables the operator to cover any irregularities of the surface to be examined. It can be used without the rubber cap, but much better with it.



The ear-pieces are united to the cylinder by elastic metal tubing three inches long, covered with braided silk. These tubes are controlled by a steel spring, regulated by a screw which serves to open and close the ear-pieces to suit the operator (see illustration), and they are readily separated from the cylinder by the use of the bayonet lock, for convenience in carrying. The interior of the tube, from its distal extremity to the ear, is perfectly smooth and highly polished, as it is very important that there exist no irregularities of the surface which will tend to break the sound-wave. The instrument is thoroughly aseptic and may be readily cleansed, without injury, by allowing a stream of water to pass through it.

To test stethoscopes, as to their power of transmitting sound, place a watch upon a table, cover it with the palm of the hand, and then press the metal bell, armed with a soft rubber cone, against the back of the hand. If the working of the machinery of the watch can be heard distinctly, you have a good instrument. No stethoscope in the market can bear this test equal to mine, and not one in a thousand can bear it at all.

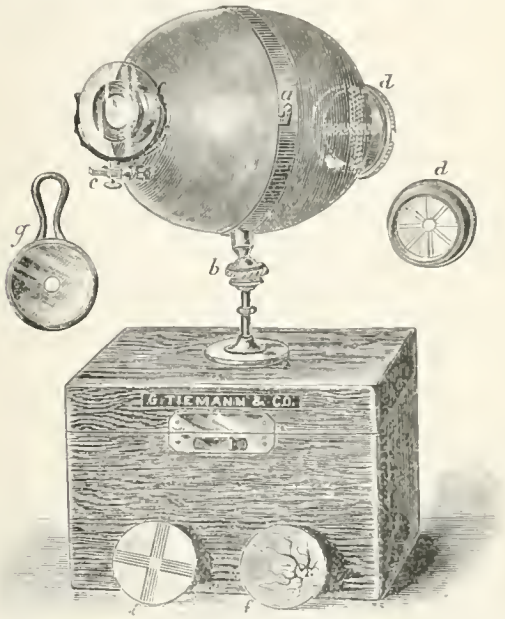
This instrument is manufactured for me by Charles Truax, Green & Co., and they hope in the near future to have it made out of pure aluminium.

A NEW SCHEMATIC EYE.

By CHAS. W. DODD, M.D.,

PROFESSOR OF OPHTHALMOLOGY IN THE CINCINNATI COLLEGE OF MEDICINE AND SURGERY.

The need of an apparatus that would be of assistance to both instructor and students in dealing with physiological optics, and also be helpful to students studying the use of the ophthalmoscope, led the writer to devise the eye here illustrated and described. His aim was to



construct an apparatus that would be thoroughly practical, inexpensive, simple as possible, capable of illustrating all the forms of ocular refraction, and of serving the student (learning the use of the ophthalmoscope) more satisfactorily than the living eye. The accompanying cut gives a good idea of the construction and appearance of the eye.

The globe is formed of two copper hemispheres, blackened without and within, easily separated or locked together by bayonet joints on opposite sides (marked *a* in cut). The eye, when in use (except when held in the hand), is supported upon the box, and a ball-and-socket joint, *b*, in the supporting leg allows the globe to be set in any position to suit the convenience of a person examining it with the ophthalmoscope. At the anterior pole of the globe, *c*, representing the refracting parts of the natural eye, is placed a lens which is readily movable backward or forward to effect the changes which occur in this region. A simple arrangement exists also at this part of the eye whereby additional lenses (accompanying the eye, or from a set of trial lenses) can be adjusted in front of the principal lens to demonstrate the manner in which spectacle lenses correct vision. At the posterior pole, *d*, is placed a ground-glass disk representing the retina, movable backward and forward like the lens *c*.

Upon the glass dish is demonstrated the formation of the inverted image upon the retina in the natural eye. In order to obtain a picture on the glass of such size as to be distinctly seen, it was necessary to give the eye a focal length of about three inches; that length is obtained, and at the same time unnecessary bulk avoided, by giving the ball an oval instead of spherical shape. When the lens and the glass retina are each placed at the half-way points between maximum extension and insertion, the eye is in a condition representing emmetropia, and a

sharp picture is formed on the ground-glass of an object twenty feet or more distant; the cross-bars in a window sash are good objects to focus upon. On bringing the eye nearer to the object, the student sees the gradual loss in distinctness of the image, and then how it is again sharpened by virtue of the power of accommodation, or in the schematic eye by drawing out the lens, thereby increasing the refractive power.

Hypermetropia and myopia, as conditions causing imperfect vision, are demonstrated by changing the position of the glass retina, thus shortening or lengthening the axis of the eye by moving it in or out. The method of correcting these errors is shown by adjusting the trial lenses in front of the lens *c*, thereby sharpening the previously blurred image on the retina. Cylindrical lenses can be adjusted to the lens-holder *c*, and the effect upon vision caused by astigmatism thus demonstrated, or combinations of astigmatism with myopia and hypermetropia, can readily be made. Any degree of refractive error within a range of six diopters can be produced by the forward and backward movements of retina and lens. For practising the use of the ophthalmoscope, the ground-glass retina is removed, and in its place is set one of the other disks shown in the cut: the one marked *f* represents the normal appearance of the fundus of the living eye, and those marked *d* and *e* have fine black lines on a white ground. When first learning to work with the ophthalmoscope, the disk *f* serves to familiarize the student with the appearance of a normal, healthy eye ground; the infinite number of pathological appearances are best studied in living eyes after the ophthalmoscope has been mastered. When the student has learned to see the fundus sharply under different states of refraction, and is ready to measure refractive errors, the disks *d* and *e* are more serviceable, the fine black lines radiating at all angles furnish a good field for accurate focusing in all meridians.

By the use of this artificial eye the student has a means of knowing just how correctly he is estimating refraction: for example, the eye is adjusted at random to any refractive condition, and with the ophthalmoscope this is estimated; then, to prove the correctness of the finding, the disk is removed, the ground-glass substituted, and a lens of the strength corresponding with the estimated error is placed in the holder in front of the eye; the image now formed on the glass retina of a distant object should be perfectly sharp, if so, the estimation was correct, but if the image is more or less blurred the variation from perfect correction can be determined by trying what additional lens will make the image sharp. This use of the eye is of great service in training a student to acquire skill and confidence in ophthalmoscopic work.

For practising retinoscopy, or the shadow-test, the eye is exceedingly serviceable, a widely dilated or a medium-sized pupil can be had at the option of the student, the full diameter of the lens answering for a dilated pupil, while the medium sized is obtained by inserting a perforated diaphragm immediately behind the lens.

An ophthalmoscopic examination we know is more difficult under the condition of a small pupil, and students when commencing to use the ophthalmoscope as a rule have this disadvantage to contend with, not always being able to have recourse to a mydriatic: with the artificial eye, however, this difficulty is eliminated, the state of the pupil is at the student's choice, and nobody's comfort is sacrificed.

In estimating refraction by retinoscopy the trial lenses are adjusted before the eye in the same manner as in a trial frame. A perforated plane-mirror, *g*, of about an inch and a half in diameter, accompanies the eye for special use in retinoscopy.

The eye and accessories pack snugly into a neat, strong box of a size convenient for carrying.

The writer wishes to express his appreciation to Messrs. Tiemann & Co., of New York, for the satisfactory manner in which they have carried his ideas into execution.

Therapeutic Hints.

Emphysema.—

℞. Olei terebinth. ..... ℥ j.–iv.
Aq. menth. pip. ..... ℥ iv.
Sacchari,
Pulv. acac. .....āā ʒ j.
M. Tablespoonful every three hours.

Psoriasis.—The following "shot-gun" loaded with all the best remedies comes from Paris and ought to hit the mark: Pyrogallic acid, salicylic acid, chrysophanic acid, ichthyol, aristol, each ʒ j.; axonge, ℥ jss. To be applied once a day.

Caffeine in small dose produces an increase in the arterial blood-pressure, the result of the changed condition of irritability of the vaso-motor centre.—Cohnstein.

Wine of Ipecac has been found by Stillmark effective in inefficient labor pains. Fifteen-drop doses were given.

Thebaic Extract in dose of five to twenty centigrammes is recommended in the pneumonia of drunkards.—Sallard.

Saline Cathartic is useful in diagnosticating intestinal obstruction. If colic is present it will purge. It may arrest a peritonitis. It will develop and make plain the more serious condition of mechanical obstruction, but must never be given in an undoubted case with the idea of affording relief, for it can only aggravate the condition.—Mudd.

Arsenicum Fifth Decimal in Nephritis. — Lobelia inflata 6 every four hours in nausea of pregnancy. Platinum muriaticum, 3x, one powder in fifteen teaspoonfuls water—a teaspoonful every three hours in utero-ovarian neuralgia. Psorinum 30 for otorrhœa. Sepia, 200 in single dose for menstrual headache. Zincum 12 for immediate relief of restlessness in pregnancy. Pulsatilla in gonorrhœal, rheumatic, and gouty affections of the joints.

Calcium iodide 6x, in itching piles. Spyilia in pericarditis. Natrum muriaticum, 3x in eczema impetiginosum. Lycopodium up to thirtieth dilution in aortic aneurism. Are all therapeutic hints from *The Hahnemannian.*

Incipient Phthisis patients are ordered by Dr. Staple the following solution to inhale. It is said to be beneficial as a stimulant and ozonizing agent:

℞. Sp. chlorof.,
Terebene,
Ol. pini sylvest. .....āā equal parts.

Of this two teaspoonfuls are to be poured into the bottle once or twice daily, and inhaled for two or three minutes at frequent intervals.

Pheneucalyptol, or a solution of from ten to twenty per cent. of phenic acid and eucalyptol, in vegetable oil, is recommended by Roussel in the treatment of all stages of phthisis. He employs it by superficial injection.

Pertussis.—

℞. Powdered belladonna root. ..... gr. ⅛
Dover's powder. ..... gr. ss.
Sublimed sulphur. ..... gr. iv.
White sugar. ..... gr. x.
M. Sig.: Take in one dose from two to ten times a day, according to age of patient and effect produced.

Glycerine in large doses has been used by Hermann, with encouraging results, for renal lithiasis. It is given dissolved in its own volume of water, at eleven o'clock each morning, in dose of fifty to a hundred cubic centimetres. Pains, and sometimes attacks of true colic, are produced on the affected side, followed by appearance of gravel or calculi in the urine, together with mucus, pus, and perhaps blood. After a time the urine becomes normal and attacks cease. The dose is repeated two or

three days in succession, or after an interval. Cures, at least temporary, are recorded.—*La Sem. Méd.*, December 10, 1892.

Oxygen Inhalations have been found useful in controlling the vomiting of cholera as well as in the algid stage.—Trivus.

Massage of the abdomen and general massage is recommended by Eccles in megrim, which he finds always attended with faulty digestion and mal-assimilation.

Terebene.—The following prescription for alopecia areata was sent to a druggist across the river:

℞. Hydrargyri perchloridi corrosivi ..... gr. j.
Lanolini..... ℥ j.
Terebene.
M. Sig.: Apply twice daily in small quantities.

He sent it back to the physician with the statement that he had no terebene in stock.

Lupus.—Harrison applies, over night, compresses wet in eight per cent. solution of sodium hyposulphite, and in the morning bathes with a one per cent. hydrochloric acid solution.

Croup.—Diminution of dyspnœa and abundant expectoration of pseudo-membrane followed the use of pilocarpine in dose of two to four centigrammes after twelve to twenty-four hours.—Degle.

Chloralose, resulting from the action of anhydrous chloral upon glucose, is said to be borne by those who can take neither chloral nor morphine, and in dose of seven to fifteen grains to produce refreshing sleep.—*La Sem. Méd.*, No. 2, 1893.

Cerebrin or brain extract, in five-minim subcutaneous dose twice daily, increases the strength and fulness of the pulse, producing increased perspiration, flushing of face, occasional headache, exhilaration, increased elimination of urine, increase of muscular strength, improved vision, appetite, and digestion. It has been successfully employed in neurasthenia, migraine, hysteria, melancholia, hebephrenia, paralysis, neuralgia, sciatica, epilepsy, and general paresis. Medullin, testin, ovarin, pancreatin, gastrin, and cardin can be used in the same way.—Hammond.

Chloral in Eclampsia.—I believe that we have in chloral hydrate an agent of wonderful therapeutic value for the relief of reflex irritation; and that in the two, venesection first, judiciously, promptly, and boldly done, followed by chloral, if the convulsions continue, we have measures that will never be supplanted by any more perfect or potent.—Ayres.

Faradization in Ascites.—Either of two plans may be pursued in applying the faradic current: One electrode placed on the upper dorsal vertebra, and the other moved over the abdominal wall, so that each group of muscles is acted on, or both electrodes held in one hand, according to the method of Duchenne, and each group of muscles made to contract several times before passing on to the next. Fatigue of the muscles should be avoided, for this indicates that the applications have been too protracted or too strong. The *séances* should not exceed fifteen minutes in duration, and they need not be more frequent than once a day. In some of the reported cases the faradic applications have been made two and three times a day, and with increased rate of improvement; but, as a rule, once a day suffices.—Bartholow.

Cramps of Cholera.—

℞. Chloral hydrate..... ℥ iij.
Morphia sulph..... gr. i
Atropia sulph..... gr. ¼
Aq. chloroformi,
Aq. destil ..... āā ℥ ss.
Sig.: Twenty minims repeated in ten minutes, and then as needed.

—Bartholow

Atrophic Rhinitis.—

℞. Thymol..... gr. iss.
Alcohol,
Glycerinæ..... āā ℥ iss.
Aq. oest..... ad ℥ j.
Use as a spray.

—Lederman.

Hæmorrhoids.—

℞. Atropinæ sulphat..... gr. iv.
Acid. tannic..... gr. ij.
Morphinæ sulphat..... gr. vj.
Cocainæ hydrochlorat..... ℈ ss.
Vaselin..... ℥ j.
M. et ft. ung. S.: Apply a small quantity to the hæmorrhoid after each stool.

Dipsomania.—Dr. Kitto writes to *Merck's Bulletin* that he has used the following formula in several hundred cases, and that it positively destroys the desire for alcohol:

Ichthyol..... ℥ ij.
Sulphate of hydrastine..... ℥ ss.
Resorcin..... ℥ ij.
Watery solution of calumba*..... ℥ iij.
Tincture of nux vomica..... ℥ iij.
Solution of the acetate of ammonia (*recent*)..... q. s. ad ℥ vi.
Two teaspoonfuls every three or four hours while awake, during a period of two or three weeks.

Caffeine is found by Monin to stimulate peristalsis.

Perityphlitis patients should be nourished by enemata according to the following formula:

Beef-tea..... fl ℥ vij.
Eggs..... No. iij.
Peptone (dry)..... ℥ ijss.
Sodium chloride..... gr. xlv.
For one injection.

—Sahli.

Tetra-borate of Soda is recommended in chronic purulent otitis media to replace boric acid. It is the result of heating equal parts of the latter, borax, and water. The precipitate on cooling is neutral.—Janicke.

Ergotinine is recommended by Franck as more prompt, sure, and constant than ergotine. The dose is $\frac{1}{2}\frac{1}{5}\frac{1}{0}$ to $\frac{1}{1}\frac{1}{2}\frac{1}{0}$. It has been used hypodermatically in a variety of hemorrhagic and other conditions.

Digitalis in pneumonia has been tried by Hoepfel in fifteen cases. Large doses decrease temperature indirectly, relieve dyspnœa by increasing the force of the heart-beat, and shorten the attack two or three days.—*American Journal of the Medical Sciences*, No. 243.

Salicylic-Acid treatment of simple pleurisy is considered valuable and not dangerous by Köster, who got seventeen good results in twenty-seven cases of primary pleuritis thus treated. Fifteen-grain doses, or twenty-two of the salicylate of soda were given three times daily.—*Ther. Monats.*, No. 3, 1892.

Hydriodic Acid Syrup. Dr. Wilcox says, offers a palatable way of administering iodine: that we can saturate the patient and avoid iodism; and that its field of usefulness is greater than that of iodide of potash.

Asafœtida has been found by Turazzo an efficient remedy for the prevention of habitual abortion. The dose is to be gradually increased from two to ten grains daily, and then gradually decreased, but kept up through the whole of pregnancy.—*Centralblatt für Gynæk.*, No. 8, 1892.

Pertussis in the Adult.—Stiller says that he has used pilocarpine for a long time, ten drops of a one per cent. solution three or four times a day, in hiccoughs of a nervous origin, and that it is the best remedy known for this condition.

Iodoform in Cholera.—Neisser calls attention to the fact that while iodoform is capable only of retarding the development in culture of most micro-organisms, it exer-

*Made by evaporating the infusion to dryness, and taking up the residue with an equal quantity of water.

cises a peculiarly fatal influence upon cholera bacilli. Based upon this observation he makes the recommendation that iodoform be tried in cases of cholera not foudroyant in character, or during the prodromal stage. The usual dose of fifteen grains a day can be safely given in pill or capsule, or other suitable form.—*Medical News.*

Potassium Iodide is supposed to be almost a specific for actinomycosis, at least in animals.

Acetanilide Poisoning has been relieved, in a case in which three drachms were taken with suicidal intent, by hypodermics of ether and the practice of lavage. After several hours the cyanosis gradually disappeared.

Threatened Abortion.—

℞. Tinct. opii deod. ..... ℥lx.
Sodii bromidi..... ℥ iij.
Choral hydrate..... ℥ jss.
Syr. acaciæ..... ℥ j.
Aquæ.....q. s. ad ℥ iij.
M. Sig.: A dessertspoonful in water every four hours.

—Wilson.

Digitalis in Aortic Disease.—Dr. Broadhead (*British Medical Journal*, No. 1,665, 1892) points out that in aortic regurgitation failure of compensation is shown either by defective propulsion or by obstruction on return, working through the lungs and right heart. When the symptoms are of the first class the effects of digitalis are uncertain; in some instances there is reason to believe that it has precipitated a sudden, fatal termination. In the second class of cases we may expect the same benefit as in mitral regurgitation. In aortic stenosis the same argument holds good, and the cases in which digitalis is to be used should be selected as in the instance of regurgitation. Here it is even less competent to overcome the direct effects of obstruction than of regurgitation, and the left ventricle may be injured if stimulated to drive its contents through a narrowed orifice. More relief is often obtained by relaxing the arterioles with nitro-glycerine, deducting, thus, the arterio-capillary resistance from the total work which the heart has to do.

Surgical Suggestions.

Ovarian Neuralgia.—

℞. Tinct. digitalis ..... ℥ j.
Tinct. gelsemii ..... ℥ ss.
Potassii bromidi..... ℥ ss.
Aquæ..... ℥ vj.
M. Sig.: Tablespoonful in water every three hours.

—*Record of Medicine and Surgery.*

Zinc Glue.—Trentler recommends a preparation, first suggested by Unna, for stiff surgical dressings suitable for fractures and dislocations:

℞. Oxide of zinc ..... 10 parts.
Gelatine..... 30 parts.
Glycerine ..... 30 parts.
Water..... 30 parts.

Apply thickly, rubbing into the muslin or gauze forming the bandage.

—*Exchange.*

Artificial Ureteral Meatus as a substitute for nephrectomy, is proposed by Dr. Trekaki in cases where, in consequence of the existence of a renal or urethral fistula, or of an injury to the ureter, removal of a healthy, normally functionating kidney is contemplated.—*Centralb. f. Chir.*, No. 45, 1892.

Eczema of the Scrotum.—Chrysarobin, beginning with two per cent. vaseline ointment, and increasing if possible to ten per cent., is preferred to pyrogallol by Veiel. The latter, however, is useful where infiltration of the skin gives way too slowly to tar preparations. When either of these drugs is used the surrounding skin should be protected with a zinc jelly.

Exophthalmic Goitre patients "belong not to the physician but to the surgeon."—Lemke.

Myalgia Lumbalis is said by Dr. Latta to be aggravated by application of heat, while in lumbar sprain heat is grateful, and this point is useful in differential diagnosis.

Acute Gonorrhœa.—

℞. Bicarbonate of soda..... ..... 40 gm.
Salicylate of soda..... 10 gm.
Teaspoonful to a quart of lemonade.

—Balzer.

℞. Acid. boric... ..... 2 gm.
Bism. subnit..... 12 gm.
Aromatic gum mixture..... .. .. 200 gm.
Give three injections daily.

—Brocq.

Herpes Zoster.—

℞. Acid. boric..... ℥ ss.
Zinci oxid.,
Pulv. amyli ... .āā ℥ j.
Vaselin. pur..... .... ℥ iij.
Lanolin..... ℥ ivss.
M. Ft. unguent.

—Broca.

Diphtheria.—Dr. Hieber has seen cause disappearance of the membrane in forty-eight hours. Permanganate of potassium in strength of three grains to the ounce is directed by Dr. Bowman to be applied directly to the membrane three or four times an hour. Eucalyptol, one part in ten of pure alcohol, has been employed in the same way. Salicylic acid, a drachm in six ounces of lime-water is given in teaspoonful dose every hour to a child a year old, by Dr. Nedzwiecki with good results. Nitrate of silver is applied in strong solution by Dr. Fulton, and after each application the parts are dusted with one grain of calomel in a drachm of powdered sulphur. Peroxide of hydrogen is greatly favored by many as a solvent and purifier of the membrane-covered tissues. Dr. Hazen alternates its application by means of a spray with a five per cent. solution of oleate of mercury. Chloral hydrate has been claimed as a specific by Dr. Galentin and others. It can be used as a gargle as well as internally. Vapor of tar and turpentine till air of room is saturated is recommended by Dr. Martindale.

℞. Hydrarg. chlorid. mitis,
Salolis,
Sacchar. alb.....āā ℥ ss.
M. et div. in chart. No. xxx. Sig: One powder every hour,

Guaiac, an old-time remedy for tonsillitis, has an advocate in Dr. Sajous. The ammoniated tincture in drachm dose may be given in half a glass of milk and the same used as a gargle.

Subdural Abscess and clotting in the lateral sinus following otitis media suppurativa, was operated by Scott and Lane, who exposed the bone, removed the clot, plugged the sinus with iodoform gauze, and then cleaned out the abscess and middle ear. After two weeks the patient was well, the temperature never having exceeded 99° F.—*The Lancet.*

Ovarian Sarcoma in a child, aged seven, was successfully operated by Dr. Croom (*Edinburgh Medical Journal*, February, 1893). The tumor weighed six pounds and had very vascular walls. It appeared to be of the round-celled variety with mucoid degeneration. The external genitals and breast were abnormally developed, and a sound passed three inches into the uterus before operation.

Bladder Tumors.—Dr. Wallace finds that the proportion of malignant tumors is very high compared with those of innocent nature. Supra-pubic cystotomy gives the best access to the bladder, and sufficiently good results follow removal of malignant tumors to justify operation.—*Edinburgh Medical Journal*, February, 1893.

Antitoxin.—A ninth case of undoubted tetanus is reported by Finotti as cured with the Tizzoni-Cattani antitoxin in dose of twenty-five centigrammes at each injection.—*Rif. Med.*, December 12, 1892.

Karbolquecksilberguttaperchapflastermull is applied by Schütz after cauterizing lupus to prevent disfiguring cicatrix.

Cholecystotomy.—Dr. Cabot reports eight cases (*Boston Medical and Surgical Journal*, December 8, 1892). He thinks it makes little difference whether the gall-bladder is drawn up and stitched to the abdominal wall or not. When, however, it can be, it is well to stitch the opening into the wound and thus shut it off from the peritoneal cavity. It is considered important to sew the gall-bladder to the parietal peritoneum rather than to the skin, to obviate persistent fistula. Drainage should be provided, and in the author's cases he has not attempted to at once close the wound in the bladder-wall by suture.

Flexible Iodoform Pencils.—

℞. Iodoform	10 parts.
Powdered acacia	1 part.
Powdered tragacanth	1 part.
Glycerine, Water	āā equal parts.

Lister says in the absence of chemical antiseptics use boiling water, perfect cleanliness, wire, horsehair, or silverworm-gut sutures, and dry dressings. He thinks iodoform may not act directly on the bacteria, but induce chemical changes in their toxic products.

A Safe Method of chloroform administration, Laurie says, does not exist. The all-important point is that the breathing should not be interfered with in any way.

Absolute Alcohol is used by Alfred Smith for disinfecting cutting instruments in abdominal work.

Uterine Fibroids should, in most instances, be left alone, according to Thornton's experience. He has not been favorably impressed by the Apostoli method.

Venesection is suggested by Haggard, and upheld by Sibley, as a rational treatment for the hæmoptysis of phthisis.

Nephrectomy at once is admitted by Wagner only in malignant tumor and tuberculosis of the kidney. In hydro- and pyō nephrosis nephrotomy is better. In benign tumors and cysts partial nephrectomy may take the place of total extirpation of the organ.

Osseous Suture is considered by Hennequin of very problematical usefulness, excepting in the patella and olecranon, or in pseudarthrosis after fracture, in which the lower overrides the upper fragment from which it is separated by soft structures, or when the end cannot be brought into apposition or kept so by external apparatus.

Carmine, two per cent., dissolved in three per cent. watery solution of soda is now thought likely to replace the aniline colors used for injection of inoperable malignant neoplasms by the Von Mosetig-Moorhof method.

Rupture of the Bladder in litholapaxy may result from using the pump when the bladder is too full, or from spasmodic contraction when the urethra is blocked with instruments. The degree of resistance offered to the entrance of water should be carefully noticed when the bladder is injected before operation.—Cabot.

Local Anæsthesia for minor operations:

Menthol	1 part.
Ether	15 parts.
Chloroform	100 parts.

Use in spray apparatus.

—Dobisch.

Tuberculosis of Joints.—König believes that extirpation of the capsule alone, without removal of the joint extremities, is an unsafe measure. Bergmann commends iodoform glycerine injections, as does also Koch (Dorpat), who treated, in ten months, 367 cases of joint tuberculosis: 100 of these involved the hip-joint, 117 the knee-joint.

Conservatism in the use of all the appliances of surgery is not inconsistent with the application of the most energetic means of relief in structural disorders. While the legitimate field of surgery is the proper use of means of relief for organic or structural disorders, there are prerequisites in the recognition of the conditions warranting an operation and in the preparation of the patient for undergoing it safely, which should characterize the highest type of the surgeon.—Gaston.

The Surgeon's Enemies are almost always sporeless bacilli, and though some of these show great resistance to the action of antiseptics, such as the staphylococcus pyogenes aureus, the common cause of suppuration, it has nevertheless been shown that carbolic acid destroys these organisms more rapidly than corrosive sublimate.—Lister.

Methylene Bichloride.—In *The Lancet*, during the last ten years, accounts of seven deaths from methylene have appeared, and this number, it is safe to say, represents but a fraction of the truth. Dastre, we think, has summed up very shrewdly the defects of this agent, and we are disposed to concur with him in his disparagement of it. According to him, it possesses the defects and not all the virtues of chloroform, and deaths from it are much more frequent than its advocates admit.—*Medical News.*

Mastoid Abscess.—Two methods of opening the mastoid antrum are in use—one by boring with a drill, the other by chiselling into the cavity with chisel and hammer. In young children, and in those cases in which the bone is softened, the operator may often open into the cavity by pressing well down with a strong knife. The chief landmarks for the surgeon are the temporal ridge and the external auditory canal. The opening should be made one-half inch below the temporal ridge and one-half inch posteriorly to, and parallel with, the external auditory canal. The chief risk lies in the danger of injuring the lateral sinus, which may easily occur to a careless operator; but if the foregoing precautions are observed there is little danger.—Schroeder.

Rupture of the Bladder occurred from trauma five times out of eight thousand surgical cases in the Cook County Hospital. Drunkenness is not only an important element in etiology, but it tends to mask symptoms. Introduction of the catheter may result in withdrawing considerable fluid. Peritonitis does not necessarily follow. As an aid in diagnosis the injection of a measured amount of warm sterilized water is in all cases to be tried, the abdomen subjected to careful physical examination before and after the injection, and the amount recovered by the catheter carefully noted. A Barnes dilator in the rectum will aid in lifting the bladder out of the pelvis against the abdominal wall. Supra-pubic cystotomy or opening of the abdominal cavity in suspected extra-peritoneal rupture is justifiable in order to confirm the diagnosis and to locate the point of rupture, so that drainage can be properly applied.—Herrick (*Medical News*, No. 8, 1893.)

Cocaine in one per cent. solution is advised by Reclus for subcutaneous use, a syringeful containing one centigramme (gr. $\frac{1}{6}$); so that the amount of alkaloid can be accurately measured, since twenty-two centigrammes have caused death. He employs it in the radical cure of inguinal hernia, hæmorrhoids, amputation of fingers and toes, radical cure of hydrocele and castration, new injections being made as the operation progresses.

Prolapse of Rectum.—Draw down with forceps and convert entire mass into eschar with thermo-cautery. —Biron.

Uterine Cancer.—When the diagnosis has been made, and that early enough to find the growth limited to the womb, there remains to the physician but one more duty —he must urge the immediate removal of the womb. —Goodell.

Kidney Cancer.—Israel lost only two cases from the operation in eleven extirpations. This gives a mortality

of eighteen per cent. while formerly it was about sixty per cent. As regards final results, one of the nine others lived six months, one five and a half years, and the rest from one to five years.

Congenital Dislocation treated by mechanical apparatus gives indifferent results. The operations proposed by Hoffa and Lorenz give promise of better.—Heydenreich.

Appendicitis.—Operative interference is indicated in mild cases, if medical treatment fails within twenty-four hours to decrease pain, pulse, temperature, tumor, and tympanites.—Ashton.

Peripheral Aneurism.—Extirpation of the sac has the advantage over ligation, that recurrences are excluded and gangrene is less apt to occur. The Esmarch bandage is not advised. When an aneurism's contents have been cogulated by remedial agents, extirpation may be required because of pressure on neighboring parts.—Heintze (*Berlin kl. Woch.*, No. 44, 1892).

Tuberculous Peritonitis is considered by Mader to disappear after laparotomy because of the entrance of air, the evacuation of the fluid, and the crowding together of the layers of the peritoneum due to the dressing.

Hysterectomy should be preferred in multiple intraperitoneal abscess, but in conditions resulting from inflammatory diseases of the uterine adnexa laparotomy is not attended with greater danger.—Le Dentu.

Prostatic Enlargement, in a large proportion of cases, implicates the lateral lobes and not the so-called median. They may greatly compress the urethra, and by increase in length they raise up a fold of mucous membrane between them, which stretches across the vesical orifice and prevents the bladder emptying itself. To distinguish between valvular obstruction and compression of the urethra, pass a catheter with a terminal orifice to the apex of the prostate. Connect a tube with funnel containing warm boracic acid solution. The height to which it is necessary to raise the funnel before the fluid enters the bladder, which, also indicated by the patient's sensation, shows roughly the amount of obstruction. If purely valvular, it enters freely and quickly at ordinary pressure. If the canal is compressed, six feet or more of elevation is required to allow fluid to trickle in. A catheter should not be passed shortly before this experimental test is made.—Moullin.

Gonorrhœa may be aborted by injecting several times a day with a 1 to 4,000 permanganate of potash solution through a rubber catheter perforated laterally along its whole extent, the fluid thus bathing the dilated canal.—Jamin.

Treatment of Eczema of the Vulva.—Lusch recommends the following prescription in this condition:

℞. Tincture of opium,
Bicarbonate of sodium ..... āā ʒ ij.
Bicarbonate of potassium ..... ʒ j.
Pure glycerine ..... ʒ jss.
Distilled water ..... ʒ viij.

Make a solution, and apply it hot, morning and night, to the diseased area. After each lotion powder the parts with the following:

℞. Finely powdered starch ..... 49 parts.
Finely powdered camphor ..... 1 part.

—*Therapeutic Gazette.*

Pruritus Ani.—Brown-Séquard calls attention to the action of coffee in causing this distressing condition. He has met with several cases in which the itching ceased spontaneously as soon as the daily use of coffee was abandoned.

The Use of Flame in Surgical Wounds.—M. Félizet brought this subject under the notice of the Societé de Chirurgie in October, 1892, alluding more especially to the difficulty experienced oftentimes in thoroughly eradicating tuberculous tissues in operations. The method of applying extreme heat which he adopted was the rapid passing over the tissues of a blow-pipe flame. Microorganisms are thus destroyed, and healing hastened; the tissues become dehydrated completely but never cauterized, unless the action of the flame upon them be prolonged beyond what is proper. During this proceeding the lips of the wound are to be protected by moistened compresses. There is commonly no reaction, no pain, nor loss of blood; union may be expected by first intention: if suppuration occur it should be taken as indicating that the "flaming" has been incompletely carried out.—*Boston Medical and Surgical Journal.*

Intubation of the Larynx.—In reporting the results of two hundred and ninety-one cases of diphtheria, J. Bokai, of Buda-Pesth, recommends highly the use of O'Dwyer's method of intubation. Of these cases there were one hundred in which recovery followed, although in only eight cases was a secondary tracheotomy resorted to, and only once with favorable results. During the past twenty months intubation has entirely superseded tracheotomy, and the results lead him to believe that intubation is a better practice than tracheotomy. In hospital practice the care of the patients is lessened and easier. One nurse can care for twelve intubation cases, where only four or five tracheotomy cases are possible. He concludes that there are but two classes of cases in which tracheotomy is called for: 1. Where there is at the same time marked pharyngeal stenosis accompanying the laryngeal. 2. Where there is marked œdema of the larynx, making intubation of little service.—*Annals of Gynecology and Pediatrics.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 6, 1893.

	Cases.	Deaths.
Typhus fever	9	10
Typhoid fever	8	2
Scarlet fever	179	19
Cerebro-spinal meningitis	10	16
Measles	168	9
Diphtheria	123	34
Small-pox	4	1
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

The Kidneys are of first importance in contemplated surgical operation. If the patient has got Bright's disease, he will have his risks from an amputation enormously increased. That risk may not be enough to deter us from operating, certainly not in a case of necessity. The patient with Bright's disease who has got a leg crushed must have the leg taken off and take the chances. But the woman who has Bright's disease, and some tumor or little growth not troubling her very much, had perhaps better be left alone. But the other condition of the kidneys, even more fatal and almost prohibitory to operative interference, is the saccharine diabetes which leads to gangrene, and leads to coma, fatal coma, serous brain, effusion in the brain under ether and after the shock of an operation.—Cheever (*Boston Medical and Surgical Journal*, No. 5, 1893).

Fissures at the neck of the female bladder, often following gonorrhœa, are to be touched every two or three days with from twenty to sixty grains of nitrate of silver to the ounce, by means of an applicator, the urethra being dilated with a speculum. Permanganate of zinc, 1 to 6,000, is suggested for daily irrigation in the above class of cases.—*Therapeutic Gazette.*

Mutilation of the Nose.—The *Critic* for April 1st, in reviewing Dr. Greville MacDonald's work on "Diseases of the Nose," says: "The work has appeared none too soon, as it is quite time a halt is called in the reckless mutilation, under the name of surgery, of so important an organ as the nose. It has become a fad with the young specialist in this country, and particularly in this city, to cauterize, cut, tear, saw, or trephine the interior of the nose, ostensibly for the cure of asthma and other so-called nervous reflexes. Dr. MacDonald declares that in his practice this heroic treatment has in some cases actually caused asthma." We suppose the nasal organ will have to suffer for a time yet, since the laity have been educated in this direction, as they formerly were in respect to cauterizing the os uteri for "ulcers," but when the reaction comes the surgical instrument-maker will have an interesting collection of useless hardware on his hands.

Childbirth Insurance.—The author of a recent work called "Anecdotes et Curiosites historiques sur les Accouchements," gravely publishes the story of a Mr. M——, of San Francisco, whose wife had suffered much in childbed. Her first two labors had been terrible, the children being born dead, and the mother escaping with her life by a miracle. The third time her husband brought her to New York and called a celebrated specialist, who at once applied the cephalotribe. When the poor woman became pregnant the fourth time, Mr. M—— took her to Marseilles, where a physician induced labor at the eighth month and delivered her again of a dead child. The fifth time they chanced upon Dr. Witkowski, of Lyons, who, undaunted by the failures of his predecessors, accepted willingly the conduct of the case. He was somewhat surprised, however, when Mr. M——, "in his American fashion," declared that he wanted his wife to be delivered of a living child, and that he would permit neither version nor the induction of premature labor; furthermore, the Western millionaire demanded a policy of assurance from the physician on the lives of both mother and child. When the doctor demurred to this request, Mr. M—— showed him similar contracts signed by the various American accoucheurs who had attended the woman in her different confinements, and assured him that that was a very general custom adopted by all the best people in America. As the conditions for a successful termination of the case seemed favorable, despite the previous mishaps, the physician at last yielded and signed a policy for ten thousand francs, receiving therefor a premium of ten per cent. This time everything went well, and the woman was delivered of a healthy daughter. Then the gentle American began to show his delight by telling the physician that he was no kind of a business man, that he should have demanded a premium of at least fifty per cent. instead of ten. The doctor replied that it was true he had not asked for a large enough premium, but, as there had been no agreement concerning the fee, he should now charge five thousand francs instead of one thousand as he had at first intended. Dr. Witkowski is evidently a good *raconteur*, and would never let a little question of fact stand in the way of an amusing story at the expense of a rich Californian.

The Etiology of Wry Neck.—It seems odd that at the end of the nineteenth century we should still be ignorant of the etiology of so common a deformity as wry neck. The discussion at a recent meeting of the Royal Medical and Chirurgical Society, however, on the subject, only made darkness visible, and made it painfully evident that much still remains to be worked out. One suggestion, probably applicable to a certain proportion of the milder cases, is that the contraction of the sterno mastoid muscles, which is—sometimes—the immediate cause of the deformity, is due to laceration of the muscle during labor. It is certainly said to occur more frequently after delivery by the breech, and is then attributed to the traction on the forecoming trunk. This laceration of the muscle causes the formation of a blood tumor, followed by cicatrization and contraction, and to this is ascribed the shortness of the affected muscle. Against this view, however, is the fact that rupture of a muscle usually leads to lengthening and not to shortening, a difficulty that is only partially met by the explanation that the rupture is not of the muscle as a whole but of some of its fibres. Then, again, in well-marked cases of wry neck there is usually a certain degree of atrophy of the corresponding side of the face, suggestive of a vicious intra-uterine position having interfered with the development of the muscle or muscles on one side. In any event the relationship of these congenital hæmatomata of the sterno-mastoid and the subsequent development of wry neck is worthy of further study, and practitioners would do well to seek to trace the subsequent history in these cases.—*Medical Times and Hospital Gazette.*

"Soda-Water" and Carbonic-Acid Water.—Two men have recently been brought into court at Brentford, England, and fined for selling "soda-water" which contained no bicarbonate of soda. The judge was very liberal in his interpretation of English terms, and did not believe in calling a thing what it was not.

Prizes of the French Anti-tobacco Society.—The "Société contre l'Abus du Tabac" offers two prizes: 1. Two hundred francs and a medal for the best report of at least four unpublished cases of disease due entirely to the abuse of tobacco, the report to embrace a consideration of the etiology, symptomatology, etc., of the diseases observed. 2. One hundred francs for a cheap and efficient remedy for the relief of the evil effects of excessive smoking in those who are unable to abandon the habit. The conditions of the award will be furnished by the President of the Society, Rue St.-Benvet, 20 sc, Paris.

Physicians in Munich.—At the end of the year 1892 there were 687 physicians in Upper Bavaria, an increase of 37 in twelve months. Of this number 404 lived in Munich, 24 more than at the end of 1891. The city has 378,000 inhabitants, so that the proportion of physicians to the general population is 1 to 936, about the same as it is in Paris. Outside of Munich there is but 1 physician in Upper Bavaria to 2,850 inhabitants. There are 107 pharmacists in the province and 39 in the city, and of midwives there are 802 in the province and but 200 in Munich.

Belladonna in Strangulated Hernia.—V. B. Zagorsky gives details of five cases, of incarcerated inguinal (4) and umbilical (1) hernia, in which, after failure of taxis, he resorted to the internal administration of extract of belladonna (one-quarter grain every hour), the result being that in every one of the cases spontaneous reduction took place after four or six doses. This effect is attributed to the powerful antispasmodic properties of the drug.—*British Medical Journal.*

The Hygiene of the Teeth.—All caries of the teeth begins from the outside, no such thing as internal caries having ever been demonstrated; hence if the surfaces could be kept absolutely clean, no decay could take place, however poor the texture of the teeth. This is of course impossible, but much in this direction can be attained by attention to hygienic rules. Parents often ask their dentists and medical attendants: "When ought teeth to be cleaned?" The answer assuredly is: "As soon as there are teeth." A very small toothbrush charged with some precipitated chalk flavored with an aromatic drug to make it pleasant, is perhaps the best means.—*The Lancet.*

Berlin Ladies have formed a "society for the discouragement of trains," and propose to do all in their power to dissuade their sisters from wearing trailing dresses on the street. Their motives are purely sanitarian, for they distinctly avow that they regard the train as a graceful adjunct to evening dress, and they do not wish to see it go out of fashion for indoor use.

Ergot as an Oxytocic is useless if not injurious, according to Barnes. He says that he has never had occasion to use it, despite the fact of his large obstetric practice.

New York Physicians may obtain, on application to the Police Department, permits which will give them the right to pass across streets blocked by processions or through fire lines, when they are obliged to do so in order to answer calls for professional service. It is necessary to have this permit ready to show to the police, as the latter are not obliged to give passage to one who merely shows his professional card.

Tobacco and Resistance to Disease.—It has been shown that tobacco smoke has antiseptic properties, and smoking has accordingly been recommended as of value in cases of epidemic disease. Some writers have even gone so far as to commend the habit and to advise all adult non-smokers, including women, to acquire it. But according to recent French observers this immunity against disease is obtained at the risk of rendering the next generation more susceptible. They assert that the offspring of inveterate tobacco users often greatly lack the normal power of resisting disease, chiefly through the transmission of defective nervous systems, and that they are largely deficient in physical development.

The Manufacture of Glass Eyes.—In Thuringia there is a whole district which is dependent for its support on the manufacture of artificial eyes—husbands, wives, and children all working together at this same means of livelihood. And yet, though these simple German village people turn out their produce by the dozen, no two eyes are ever the same. No artificial eye has its exact fellow either in color or in size in the whole world. The method of the manufacture is not a very complicated art. There are firstly glass plates, which are blown by gas jets, then moulded by hand into the form of an oval-shaped cup. Then there is the coloring of the eyes, which is effected by the means of tracing with fine needles, the tints being left to the taste of the individual worker, though the scope of their taste is necessarily limited to grays and blues, and browns and blacks, which colors are assorted together before being eventually despatched to their various destinations.—*The Hospital.*

The Influence of Exercise upon the Utilization of Nutriment.—Dr. Rosenberg caused a dog to do a certain, exactly estimated, amount of work upon a tread-mill. The experiment lasted four hours. The animal was fed with lean horse-flesh, lard, rice, and water; the entire excrement was carefully examined for nitrogen and fats. It was shown that the exercise during either stomachic or intestinal digestion did not affect in the slightest the proportion of food absorbed. The conclusion was therefore reached that assimilation proceeded at the same rate, no matter whether the animal was at rest or undergoing the most violent exercise.—*The Dietetic and Hygienic Gazette.*

The Island of Zante, which has been visited twice by destructive earthquakes within the past few months, suffered severely from the same cause in 1822, and again in 1841. In fact the inhabitants of this island have never felt much security in their home, and have ever been in terror of a repetition of these terrible upheavals of nature.

The Study of Medicine.—The following question and answer appeared in a recent issue of the New York *Sun*: "'Will you please inform me if there is a medical school in New York in which the lectures for the first year are given in the evening, or any time after 3 P.M. Duffy.' Duffy, you and dozens of other 'would-be doctors' think you can study medicine in the happy-go-lucky way the law-pills study law—lectures in the afternoon, office work in the morning. You must give up that idea at once. Medicine requires twenty-five hours out of twenty-four, and more on Sundays and holidays. The lectures in every medical school are given when the professors and lecturers can find time for them. They're given in the morning and in the afternoon, and the evening; and some of the private 'quizzes' begin at 10.30 or 11 P.M., and stop in time to get ready for breakfast if you dress quickly. Now, Duffy, if you ask because you think medicine is a snap like these afternoon law schools, you'd better keep out of it; but if you can stand the pace, and ask simply because you're ignorant, why, go ahead, and with good health and hard work may get your license to 'kill, kill, kill, kill, kill.'"

Syphilitic Pneumonia.—Dr. Brocq has reported the case of a patient, suffering from syphilis, who had a consolidation at the base of the lungs, the signs of which were tubular breathing, dulness on percussion, and subcrepitant râles. There was also some cough. Neither tubercle bacilli nor pneumococci were found in the sputum. The patient was treated by mercurials, and the lung trouble disappeared in three or four weeks.

Politics and Public Medical Officers.—No one who is familiar with the scientific and executive work of Dr. Dewey can fail to endorse most heartily the sentiments of Dr. Hack Tuke regarding the recent removal of this officer from his position as medical superintendent of the Kankakee Asylum. Dr. Tuke says: "The American papers report a proceeding on the part of the Governor of Illinois which ought to be stigmatized in the manner it deserves by every medical journal. The old country has many faults. It may learn many things from America. There is one offence, however, of which it is not guilty—that of making changes in the appointments held by medical men at the head of public institutions on a change of government; yet this has just been done in the State of Illinois. Dr. Dewey, the medical superintendent of the Kankakee Asylum, is to be deposed from an office which he has held with so much credit to himself and advantage to the patients for many years. I speak from personal knowledge when I say that this physician is an honorable man, free from reproach, and devoted to the institution which he has made a great success under the exceptional difficulties which a new departure from the old lines has necessitated—the experiment, namely, of providing a number of separate buildings for the patients in addition to the central asylum. It has demonstrated how much good may be done in this direction, and has exercised a great influence upon the construction and arrangement of similar institutions in carrying out the intentions of Mr. Frederick Wines and others in regard to segregation, as opposed to herding thousands of patients together in one monster building. Dr. Dewey has solved a difficult problem, but now that the tide of political feeling has taken a certain turn, it has swept him away, regardless of his admirable work, and he is to be superseded by another man."

The Founder of Journalism and Dispensary Practice.—In Richelieu's day there lived in Paris a doctor named Théophraste Renaudot. This man was an intimate friend of the genealogist d'Hozier, who often allowed him to take copies of letters received from different cities in Europe. It occurred to Renaudot that what gave so much pleasure to himself might also interest his patients. Possibly he fancied physic would work better combined with light doses of literature. At any rate, tradition has it that Renaudot usually paved the way to a prescription with one of d'Hozier's letters. The system worked so well that the worthy doctor thought of putting the letters within the reach of others by having them printed. Richelieu granted the necessary license, and thus began the famous *Gazette de France*, for a long time the only French public journal. It is still in existence; and is perhaps, says Grenville Murray, the only paper in the world that has never modified the color of its opinions; for it remains to-day, as before the great revolution of '93, entirely devoted to the Bourbons. Renaudot died "as poor as a painter," according to one of his enemies. Gilles de la Tourette has recently written a brochure of Renaudot's life, to help defray the expenses of a statue to be erected shortly in Paris in honor of the founder of journalism and dispensary practice.

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NEGLECTED FRACTURES IN CHILDREN.[1]

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SIX cases of fractures in children which had been overlooked by parents or physicians, or so badly treated as to leave more or less deformity and disability, have come under my observation during the last two months, and seem to me so instructive as a warning to the careless that they deserve some extended study. We will first relate the cases.

CASE I. *Fracture of Clavicle Overlooked by Parents.*—John B——, five years of age, first seen November 15, 1892. Ten days ago he fell from a barrel and injured his right shoulder. The following day he complained of pain on motion, but the mother did not observe any swelling or deformity of the shoulder until yesterday. He was treated by simple home applications. Examination shows slight drooping of the right shoulder, with thickening, crepitus, and false point of motion at the junction of the middle and external thirds of the clavicle. Treated by immobilization, and on the 28th inst. there was apparently firm union.

CASE II. *Fracture of Radius and Ulna Overlooked by Physician.*—James Q——, eighteen months old, first seen November 14, 1892. This child fell from a trunk, with his left forearm doubled under him, twelve days before. A physician saw him, made a diagnosis of sprain of the arm, and advised local application of witch-hazel. Since then the arm has been painful on manipulation and the mother has noticed some deformity. Examination shows angular deformity at the middle of the left forearm, involving both bones, with callus at the point of fracture. No crepitus or false point of motion to be discovered. Probably the fracture was of the greenstick variety. The following day the bones were refractured, and on November 28th firm union was obtained in good position.

CASE III. *Fracture of Radius and Ulna Improperly Treated.*—Thomas H——, one year old, first seen December 27, 1892. Two weeks before, the child fell a distance of three feet and struck on the right arm. He has been treated by a physician and comes to us because this physician has gone out of town. Splints have been applied. Examination shows that both bones of the right forearm have been broken, but while the radius is fairly straight there is considerable curve to the ulna. The following day the arm was straightened, and some union was found to have already taken place. January 11, 1893, excellent position, fair union.

CASE IV. *Fracture of Radius and Ulna Overlooked (?) by a Physician.*—Harry F——, four and a half years of age, first seen December 16, 1892, fell nineteen days ago, injuring forearm. He was treated by a physician, who put on a splint, but removed it in a week and told the parents that the arm "was all right and would grow straight." Examination shows that the bones of the forearm are curved, with a posterior convexity. The lower fragment of the radius projects backward, with marked deformity at the middle of the bone. At the same level the ulna is bent and thickened, but without projection of the fragments. No mobility of the fragments. In spite of the marked deformity, pronation and supination of the forearm are good. December 21st, the arm was straightened, refracturing the bones. January 10, 1893, excellent position, firm union.

CASE V. *Fracture of Radius and Ulna Badly Treated.*—Robert R——, thirteen years of age, first seen October 22, 1892, was knocked down and run over by a wagon six weeks before. A physician saw the accident, came home with the lad, set the arm, and applied splints. The physician was a stranger to the parents, and they did not know his name and address, but they trusted to his promise to come in again, and the dressings remained untouched until the physician returned four weeks later and removed them. He told the parents at that time that the arm was all right, but they have discovered that it is crooked and bring him to us.

Examination shows that the bones of the right forearm are sharply bent inward about their middle, forming an angle of about 150°. At the angle there is thickening from callus. Pronation and supination are almost entirely lost. The arm is greatly atrophied but is otherwise normal. On October 25th the bones were refractured and the deformity of the radius completely reduced, but the ends of the ulna overlapped so that perfect reduction was impossible. A splint was applied, immobilizing the elbow, with the hand in complete supination. The result was good, the arm being fairly straight, with slight lateral deformity, but with rotation about two-thirds of the normal.

CASE VI. *Fracture of Internal Condyle of Humerus, with Dislocation of Radius, Improperly Treated.*—James F——, eleven years of age, first seen December 17, 1892. Three and one-half months previously he fell from a wagon, striking upon his right arm. It was treated by a physician, who set it, in a consultation with two others, ether having been administered, and put it in a splint. The splint treatment was continued for three months. Examination shows that the elbow is partially ankylosed, being flexed at about 135°, very little flexion or extension being possible, but rotation of the forearm is free. There is a mass about the internal condyle, which is displaced backward, and behind the external condyle the head of the radius can be felt rotating under the skin. It is plainly evident that the deformity of the accident could never have been properly reduced. Advised to go to hospital for resection.

These cases tell their own story and do not need any analysis. It seems scarcely credible that such mistakes could be made, and for that reason I have preferred to take these cases observed in the course of two months of ordinary work, without looking up former cases on my records, or seeking examples from literature—the latter, however interesting they may be, do not sufficiently impress our minds as possibilities of present practice. The blunders in these instances seem inexcusable, for none of them could have been cases of unusual difficulty, judging from their condition when first seen, and I should feel ashamed of any of the second year students in my charge who could not recognize them. At the same time it behooves us to remember that we did not see them in the first stage, and must depend upon the story told by the parents, and we do not know what difficulties of diagnosis and what idiosyncrasies of patients and parents had to be overcome by the physicians who attended them. It will be more profitable for us to study the

[1] Read before the Section for Pædiatrics of the New York Academy of Medicine, January 12, 1893.

causes of such errors and the means of avoiding them, than to spend our breath in condemnation.

In the first place, the injury may be overlooked by the parents from ignorance, or mere carelessness, but this error is seldom met with except in greenstick fractures. More frequently a physician is called in and the mistake is his fault—a fault without real excuse, although it may admit of easy explanation, on account of the difficulties surrounding the diagnosis of fractures, and especially those in children. Let us remember, moreover, that we have to deal with children, often too young to make definite complaints, and that the parents are not apt to criticise the treatment adopted with the attention which they would use were they themselves its object, and therefore the careless practitioner has less than the usual check upon him.

One of the common difficulties which interferes with the recognition of fractures is the swelling from œdema or extravasated blood, which may be so great as to obscure the signs of fracture. The deformity may be slight, the untorn periosteum or some fibres of bone holding the ends of the fragments in apposition. The deformity of a complicating dislocation, moreover, may mask that of the fracture; or, on the other hand, the deformity of the fracture may closely resemble that of a dislocation, as in separation of the lower epiphysis of the humerus. The disability may also be very slight, for I have seen a child with a complete fracture of the clavicle able to move the arm quite freely and apparently without pain, just as this is sometimes observed in adults. One striking case of the latter I remember, in which the patient refused to believe that his clavicle was broken, and would not allow me to apply a bandage of any kind, insisting upon going back to his work, which he had left for half an hour in order to get some liniment to rub on his supposed "sprain."

Absence of deformity and disability are naturally most marked in the greenstick fractures so common in young bones, and, fortunately, in those cases which are not much bent, overlooking the injury is not likely to be followed by such serious consequences as in the cases just related. I have known a thoroughly trained man, a hospital graduate and usually a careful observer, to overlook a greenstick fracture of the femur in an infant. The fracture had occurred just above the condyles, the only signs present being local pain and tenderness, with abnormal lateral mobility in one direction only, and the surgeon failed to recognize it because he omitted to try for mobility in that particular direction.

In addition to all the difficulties in the diagnosis of fractures which may be met with in adults, we have to deal in children with a natural alarm and excitement caused by any examination, even if no pain is given, and often also, with an equally great and often totally unreasonable lack of control in anxious parents. Here, as in every other relation, the spoiled child and the silly parent are severe trials.

How can we best overcome these difficulties? In the first place, by making a thorough and careful examination in every case, no matter how simple it may appear. When a child has received any considerable injury, every limb and even every bone in the body should be examined, treating the child on the same principles as the unconscious man who has been knocked down in the street and is unable to describe his sensations. It should be a cardinal rule in the examination of children, both for disease and for injury, to begin the examination by handling some healthy or uninjured part of the body, so that the child may become accustomed to the physician's presence. Examination of the normal limb refreshes the mind in the anatomical relations and normal movements, and sometimes gives valuable information as to individual peculiarities. Thus I recall one case in which my understanding of the deformity present in an old fracture of the humerus was greatly enlightened by the discovery on the corresponding bone of one of those processes occasionally found above the internal epicondyle. After this gradual approach, the examination of the injured limb may begin, and the child should be induced to move it voluntarily by the offer of some attractive thing, or by gentle tickling or pricking of the skin, or the limb can be placed in a position in which it cannot remain without support, and the latter be gradually withdrawn, in order to ascertain if the part is able to sustain itself.

The neighboring joints must be thoroughly tested in their motions, both normal and abnormal, and finally the direct examination of the suspected bone should be begun. The eye has already noted any visible deformity. By taking hold of the ends of the bone, if the injured point is in the middle, gentle manipulation will generally decide as to the existence of a false point of motion. If the bone has been injured near one end, the same information can sometimes be gained by moving the bone next above or below in a direction not naturally allowed, as, for instance, in a fracture near the condyles of the humerus or femur, the forearm or leg being carried laterally, while the bone above is held stationary, so that the lower end of the latter will be made to move by the lateral ligaments This lateral mobility is perhaps the easiest to overlook, and I can recall a case of fracture of one epicondyle of the humerus in a young girl, with considerable swelling, in which this lateral mobility was almost the only sign of fracture until an anæsthetic was given and crepitus obtained, and in which, having failed to apply this test in a hasty preliminary examination, I was betrayed into expressing the opinion that the injury was a simple contusion. In making this test, it should be noted that it is necessary for the limb to be fully extended, for even with slight flexion, attempts at lateral motion will cause rotation of the upper bone on its long axis, a movement which may closely simulate a false point of motion near the joint.

Do not try for local tenderness until all other parts of the examination have been completed, and it may then be unnecessary to try for this sign. If it should be necessary to touch the injured point itself, to discover false point of motion, deformity, or crepitus, do so very gently until the exact place where the fingers should be placed has been ascertained, and a single quick movement will then generally give the desired information, and very likely the deformity can be reduced by the same movement and with only momentary pain. It is needless to say that the entire manipulation must be executed with the greatest possible gentleness. Children differ in courage and in capacity to bear pain, and will sometimes exhibit even more fortitude than the average adult when they are properly managed.

This thorough method of examination will require much time and patience, but it should be the conscientious duty of the physician to undertake it. If the child or the parents are unmanageable, or if the case is very difficult, recourse must be had to an anæsthetic. In children this proceeding is so free from danger that it can be employed oftener than in adults, and it is of the greatest importance in these cases that an exact diagnosis should be made, for without that correct prognosis and intelligent treatment are impossible. If the case is beyond the powers of the physician from its intrinsic difficulty, he should seek help in consultation; if it is beyond his control on account of the unmanageableness of the patient or parents, he should withdraw from the case. If the issue is disastrous, he cannot protect himself behind the refusal of the parents to allow proper treatment to be adopted, and his only safeguard is to retire.

But the term "neglected" is applicable to fractures which are recognized, but improperly treated, as well as to those which are overlooked. The most common errors in the treatment of fractures are first, imperfect reduction; secondly, inefficient retention; and thirdly, bad judgment as to the continuance of immobilization, resulting in stiffness. I omit the accidental complications from consideration, such as pressure sores, gangrene, dermatitis, nerve paralysis, muscular atrophy, etc.

The first error is to be avoided by thorough manipula-

tion, after careful study of the seat and direction of the fracture and of the deformity to be overcome, under anæsthesia if necessary. A deformity which tends to recur may often be permanently removed by carrying the motion of replacement a little beyond the normal, and this method of over-correction is exceedingly important in greenstick fractures, for it is often necessary to make the fracture complete in order to wholly remove the deformity.

The second source of error is to be met by the selection of appropriate apparatus for the special case. It is difficult to retain ordinary splints on children, but much may be done by the judicious use of rubber adhesive plaster, and starched bandages, and by immobilizing the neighboring joints at the same time. Plaster of Paris is also deservedly a favorite means for immobilizing the parts. Orthopædic apparatus is often the most efficient and cleanly method of support in fractures of the lower extremities.

The danger of stiffness is to be met by early removal of apparatus, especially as the period required for union in children is so much less than in adults. Thus I have seen a fracture of the humerus in a new-born child unite solidly in twelve days, and it is not uncommon to find strong union in less than three weeks in older children. On one matter in this connection particular stress should be laid, namely, the abuse of passive motion which is so common. In two or three instances I have seen tubercular arthritis of the elbow and shoulder follow persistent and violent attempts at passive motion employed to overcome stiffness remaining after a fracture, and I am convinced that in the majority of cases more is to be gained by leaving such limbs to the action of time and natural use than by having them systematically exercised to the great discomfort of the patients.

This paper is not intended to take up the method of treating these failures in surgical art when once called into existence. The bones of young children are usually easily refractured and properly set, and the after result in some cases is as good as if they had been properly treated from the first. But unfortunately not in all, for the deformity may have resulted in such alterations in surrounding parts as to prevent complete restoration, even by a cutting operation, and this is especially true of those fractures which occur in the neighborhood of the elbow joint. Here the most skilful surgeon will frequently find himself compelled to completely resect the joint, in order to correct the deformity and to secure good motion.

THE RESTORATION OF SYMPHYSEOTOMY.[1]

By H. J. GARRIGUES, A.M., M.D.,

NEW YORK

"*Una Fides, Altare Commune*," is the noble legend of this body. Medical science has in the course of time become so extensive that it has been found necessary for those who strive after the highest perfection of execution in one part of its domain, or who contribute most to the elaboration of a certain branch of it, to limit their original researches and their practice, more or less exclusively, to one group of organs or one kind of disease. It is due to this wise division into specialties that medical science has taken such enormous strides forward in the course of half a century. But if it is impossible for a man to do original work in all directions, and if it is even hardly feasible to be sufficiently familiar with all medical science to practise it in such a way as to gain credit for himself and do justice to his patients, every physician who is imbued with that spirit which distinguishes the man of science from the mechanic and the moneymaker, wishes at least to know the most important discoveries, inventions, and events that are made and occur in any part of the vast field of medical science, in the widest sense of the word. As a help in the pursuit of this design this Academy from time to time provides general meetings under the auspices of one of its sections, and thus it has come to pass that the President, having been acquainted with the occurrence of an event of great importance and far-reaching consequences in the practice of the obstetrical art, has invited the Academy at large to listen to a report from the Section on Obstetrics and Gynecology, and I have the honor to open a discussion by some brief remarks on the restoration of symphyseotomy.

History and Statistics.—The history of this operation is unique. It was proposed in 1768 by Jean René Sigault, a French student, and rejected by the Academy of Paris, but performed by him in 1777, as soon as he had graduated. It was hailed with enthusiasm, but soon fell into discredit, and only survived in Italy, and was, perhaps, dying out even there, when, in 1866, Professor Morisani took it up and became an ardent champion for it, but without finding any response outside of Italy, until, in 1891, a pupil of his, Spinelli, demonstrated it to Pinard, in Paris, who became much interested in it and performed the first operation outside of Italy in 1892. Since then most other countries have followed in rapid succession.

The first symphyseotomy in this country was performed by Dr. Hirst, in Philadelphia; the first in this State, by Dr. Jewett, in Brooklyn, and the first in this city, by myself, on December 30, 1892. Dr. Robert P. Harris, of Philadelphia, has kindly furnished me the following statistics:

From 1777 to 1860, which may be called the old period, there were 100 operations, in which 31 women and 65 children were lost. Since 1866 till the end of 1892 there have been 173 operations. In 1892 there were, as far as ascertained, 66 operations in nine countries, with 5 deaths. Since January, 1866, which in some respects forms a turning-point in the history of the operation, there have in all been 122 cases, with 12 deaths, *i.e.*, nearly ten per cent., but most of these were due to prior conditions. The rate in Italy has been 2 women lost out of the last 44 reported operations.

Pinard has had 13 operations in as many months, without maternal loss. Twenty women operated on by him and his associates all recovered, and 18 children lived. In this country there have been 17 cases with 3 deaths.

Space Gained.—If the symphysis pubis is cut in a woman lying on her back, with outstretched legs, the ends of the bones separate very little, only about half an inch; but if the joints of the hips and the knees are bent, the distance is 1¼ to 1½ inch, and by pulling on the iliac bones this is easily increased to 2¾ inches, without injury to the sacro-iliac articulations; but if the separation is carried as far as 3½ to 4 inches, one or both of these joints are torn open.

In consequence of the separation of the pubic bones a considerable change takes place in all the diameters of the pelvis, whereby it is rendered much more spacious in all directions on planes supposed to be laid at right angles through the axis.

The antero-posterior diameters cease to exist, and instead a gap is formed in front which allows the presenting part to enter between the ends of the bones. If the vertex presents, the anterior parietal eminence enters in this way between the bones to such an extent that it has the same effect on the mechanical relations between head and pelvis as if the antero-posterior diameter had become one fourth to three-eighths of an inch longer. In consequence of the yielding of the sacro-iliac articulations, which during pregnancy become more mobile, the distance from the centre of the promontory to the ends of the pubic bones increases the more these bones are separated from each other, an increase which at the maximum safe distance of two and three-fourths inches between the ends of the bones measures over half an inch. The trans-

[1] Read before the New York Academy of Medicine, May 4, 1893.

verse and the oblique diameter, and every line drawn from the middle of the promontory to a point on the anterior half of the ilio-pectineal line increases from one-quarter to one-half of the distance between the ends of the pubic bones. At the safe maximum distance of two and three-fourths inches these lines gain, therefore, from about three-fourths to an inch and a half in length.

Indications.—Supposing we have to deal with a head of normal size we can easily calculate the lower limit within which symphyseotomy is available The bi-parietal diameter of the fœtal head at term is three and three-fourths inches. The distance from the middle of the promontory to the end of the pubic bone is elongated one-half inch, the head enters to a depth of one-fourth inch or more, and consequently three-fourths to seven-eighths inch are gained. Taking into consideration the compressibility of the head to the amount of one-fourth inch, we may say that the passage will be difficult with a conjugate of two and three-fourths inches, and easy above three inches.

As to the upper limit, it ought in a flat pelvis to be placed at 3½ inches, where the proper domain of forceps and version begins.

In a generally contracted pelvis, which practically offers the same resistance as a flat pelvis with a conjugate ½ inch shorter, I think it would even be proper to extend the upper limit to a conjugate of 4 inches.

Besides the narrowness of the pelvis other conditions may become an indication for symphyseotomy. Thus it has already been used in the case of a tumor developed in the pelvic cavity, and it has been proposed for mento-posterior face-presentations, in which the chin cannot be rotated forward, and in cases of absolute narrowness of the pelvis if the child is dead, in order to facilitate craniotomy and embryotomy.

Besides measuring the pelvis the accoucheur must examine the mobility of the sacro-iliac joints by bending the hip- and knee-joints and turning the knees outward. An anchylosis of one of these joints is a contra indication to the operation.

Modus Operandi.—Two methods are used at the present time, the subcutaneous and the open. Morisani, of Naples, to whom we practically owe the survival of the operation, makes a longitudinal incision 1¼ inch long in the median line, ending ½ to ⅓ inch above the symphysis. Next, he cuts sideways into the pyramidalis muscles deep enough to make room for the index-finger, which he introduces down to the lower end of the symphysis, and along which he slides a strong sickle-shaped knife (Galbiati's falcetta), and cuts from behind and below, forward and upward. The urethra is held over to the right side by means of a metal catheter. After delivery, the wound is closed with sutures and dressed antiseptically, and the pelvis is surrounded by a roller bandage, which is rendered immobile by painting it with water-glass.

The open method has been introduced by Pinard, of Paris. It consists in making a longitudinal incision in front of the symphysis, extending it sufficiently above the symphysis to have easy access to the latter and below to the root of the clitoris, or, deviating to the left of that organ, into the vulva between the labium majus and minus.

The subcutaneous method has the advantage of great simplicity of execution, and of having a small wound entirely removed from the lochial discharge, and it gives rise to less hemorrhage. On the other hand, it has the grave drawback that if hemorrhage occurs it cannot be properly attended to. As a matter of fact, most of the new operations have been performed according to the open method, with small variations upon which we cannot enter here.

It happens occasionally that the symphysis is ossified or has so irregular a shape that no knife can be drawn through it. In such cases it must be divided with a saw, preferably a chain-saw.

The bladder may be so compressed between the head and the symphysis that it hardly can be distinguished, and may therefore be wounded, and both bladder and vagina may be caught between the ends of the pubic bones if care is not taken to hold them back in closing the pelvis.

After having cut the symphysis, Morisani leaves the expulsion of the child to nature, or, if necessary, uses the forceps. The new operators prefer to deliver at once, and I think the latter is preferable and should be done according to the rule that if the head engages, forceps should be used; if it is movable above the brim, version should be performed.

In a large number of operations the child was born more or less asphyxiated. Everything needed for its revival should therefore be kept in readiness. If the placenta does not follow the delivery of the child, it should be removed before closing the wound.

In closing the wound some have brought the ends of the bones together separately, and even gone so far as to bore holes and unite them with three silver sutures. From my own case and many histories I have read, I conclude that all that is really necessary is to put the sutures in so deeply as to include half an inch of the sinewy tissue on both sides in front of the symphysis and the pubic bones. In closing the sutures the bones are brought together by pressure on the trochanters, and the legs should be stretched out or even hang down on each side of the operator, which approximates the ends.

In order to keep the ends together I do not know of anything more convenient and in every respect satisfactory than rubber adhesive plaster, three broad straps of which are put round the trochanters and crossed on the abdomen, above the wound. The wound should be dusted with iodoform and covered with iodoform gauze and gutta-percha tissue, and the dressing renewed every day, as it becomes soiled by the lochial discharge.

The patient is lifted on the bed pan when needed by holding her behind the trochanters. She should lie with outstretched legs and the knees should be tied together. She should be kept in bed for three weeks.

Prognosis.—The prognosis of the operation for the mother's life and the unimpaired natural gait may be said to be absolutely good, if the above-indicated limits are respected and strict antisepsis is used in the performance. It is true, even in the modern operations, nearly ten per cent. of women have died, but their death had no connection with the operation. In a few cases a vesico-vaginal fistula will form, but it will heal by itself or can later be closed by operation. For the child the prognosis is not quite so good as for the mother, several having died from fracture of the skull and many being born more or less deeply asphyxiated; but the infantile mortality of ten per cent. is much less than in difficult forceps or version operations, not to speak of operations by which the child is purposely mutilated and killed.

Relation to other Obstetric Operations.—By the revival of symphyseotomy the indications for nearly all the measures to be taken in order to overcome an obstruction preventing the birth of the child have been changed, a chief reason why every practitioner engaged in midwifery should acquaint himself with the scope of the new operation, even if he does not wish or is not prepared to perform it himself.

First of all, the revolting direct killing of the child in the mother's womb, or, what amounts to the same, the abstention from interference which awaits the natural death of the child and then mutilates its body, must be banished from the list of obstetric resources in places where it is possible to have symphyseotomy performed.

Induction of premature labor with a maternal mortality of over five per cent. and an infantile mortality of over forty-three per cent.,[1] must be abolished.

The improved Cæsarean section, which even in the hands of a Leopold shows a maternal mortality of eight per cent.,[2] and which in the hands of miscellaneous

[1] Wyder: Archiv für Gynäkologie, 1888, vol. xxxii., p. 60.
[2] Leopold: Ibid., 1889, vol. xxxiv., p. 313.

operators has been attended by a loss of nearly twenty-six per cent. of the mothers,[1] and over eight per cent. of the children, must be confined to cases in which the true conjugate measures less than two and three-quarter inches.

Symphyseotomy seems even called to supplant Porro's operation to a great extent, since experience shows that it can be performed successfully when the woman has been in labor for many days, whereas the maternal mortality in Porro's operation reaches the fearful height of fifty-seven per cent.

Even many forceps and version operations ought to yield to symphyseotomy, since these operations performed with a true conjugate of less than three and one-fourth inches are accompanied by a great mortality both for mother and child, or lead to idiocy in the latter.

The operation has, in several cases, been performed twice on the same woman, the second operation proving no more difficult and just as successful as the first.

This fact alone should be a strong argument against the use of silver-wire sutures, which would prevent the passage of the knife in a later operation.

In the above we have supposed the child to be normal and the pelvis defective. It is evident that a normal pelvis with an unusually large or deformed child offers the same mechanical disproportion and calls for similar interference.

Little over a year has elapsed since Pinard performed his first operation, which was soon followed by others in nearly all civilized countries. The facts in regard to all details are fast accumulating. Soon we shall know more definitely when and how to operate, but the experience gained suffices already to warrant the declaration that the generalization of symphyseotomy is an event of the greatest importance and far-reaching consequences in the history of practical midwifery.

SOME FURTHER REMARKS ON ELASTIC CONSTRICTION AS A HÆMOSTATIC MEASURE, WITH A LETTER FROM PROFESSOR VON ESMARCH.

By N. SENN, M.D., Ph.D.,

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Last year I had the honor to read a paper on "Elastic Constriction as a Hæmostatic Measure" before the National Association of Railway Surgeons. The principal objects in writing this paper were to call the attention of surgeons to the harm resulting from prolonged and too tight constriction, and to demonstrate, what is now common practice in this country, that elastic compression as a preliminary step to the application of the constrictor is unnecessary; that the desirable degree of bloodlessness can be secured by simple elevation of the limb.

The conclusions deducted from the paper were strongly endorsed by a number of the most prominent surgeons present, and the paper was quite extensively noticed in most of the medical journals in this country. I have very recently received a letter from my esteemed friend, Professor von Esmarch, in which he discusses the paper at some length; and as the letter contains many points of great interest, and as the views advanced represent the present teachings and practice of this distinguished surgeon on elastic constriction and compression as blood-saving measures, I am confident that he will pardon me for giving it the widest publicity in this country without his permission. Professor von Esmarch is better and more favorably known in this country than any of the living German surgeons, hence I feel that in doing so I am only performing a duty toward the many American surgeons who enjoy his personal acquaintance and who are familiar with the products of his fertile pen.

"Kiel, February 20, 1893.

"Dear Friend and Colleague: You were kind enough last year to send me a copy of the lecture on 'Elastic Constriction' which you delivered before the American Association of Railway Surgeons. At that time I merely glanced at it, as I had other work and investigations on hand, and only now, as I am at work on the chapter on artificial bloodless methods for my book on Military Surgery, came to study it more thoroughly. I greatly regret that I cannot agree with you on certain points contained in your paper, and as I greatly value your judgment, and as your position among American surgeons ranks so highly, I would like to endeavor to give you a better opinion of the blood-saving method by constriction, and my position as inventor of the same. Having received such hospitality in your house at my visit in Milwaukee, and as you and your kind colleagues presented to me as a token of esteem the valued gold badge representing the bloodless method, which was received by me as the honored inventor, I now regret that I had not at that time an opportunity to more thoroughly discuss the above method with you, and to demonstrate to you the improvements over my original device contained in my first publication. Please allow me, therefore, *sine ire et studio*, to state my objections to some of the points in your lecture, hoping you will receive them kindly from your old friend and colleague.

"You are correct in stating that I am not the inventor of elastic constriction, but that by my improved technique I have given it a permanent position in modern surgery. It is true that Grandesso Silvestri applied elastic constriction in amputations before I did. Nevertheless I practised elastic constriction before I heard of the work of the above-named gentleman. I also wish to state that previous to that time, back in 1855, I applied roller bandages around the limb before amputation, to save blood, although ignorant of the fact that Brünninghausen had advised the same as far back as 1818 (see my lecture in Volkmann's 'Klinische Vorträge,' p. 380). The principle of my invention is not the controlling of hemorrhage by elastic pressure instead of digital and tourniquet pressure, as had been previously done, but my new and recognized idea that elastic constriction can be applied not only to amputations, but to all operations on the extremities, without loss of blood, and also giving the surgeon a bloodless field for operation. This brought forth the astonishment of Billroth, the enthusiasm of von Langenbeck, Strohmeyer, Brandis, and others; and the remarks of the great English surgeon, Simon, whom Strohmeyer quotes in his 'Erinnerungen,' p. 477. It would perhaps be convenient at the same time to read what Strohmeyer says on pages 477 to 482 in regard to this matter.

"I cannot in the least coincide with you in your statement on elastic compression, saying it is not only useless but also injurious, as you thereby condemn the most important part of my method.

"I have remarked in the beginning that firm elastic compression in cases of suppurative affections is dangerous ('Vorträge,' p. 284), and advised in such cases to elevate the extremity for a short time before applying constriction, and had subsequently no ill results. The same also applies to soft, malignant tumors, but I do not think it justifiable to abandon elastic compression entirely for these reasons, as there are still a sufficient number of cases left in which compression would be unaccompanied by any risks and would certainly be far superior to simple elevation, among which are the following: 1. Operations for necrosis and bone abscesses. 2. Osteotomies. 3. Operation for pseudo arthrosis. 4. Operation for reposition of old luxations. 5. Extirpation of fibroma, lipoma, angioma, enchondroma, osteoma, neuroma, etc. 6. Plastic operation on cicatrices. 7. Operation for Dupuy-

[1] Caruso: Archiv für Gynäk., 1888, vol. xxxiii., p. 255.

tren's finger contractions. 8. Operation for suturing of nerves and tendons. 9. Operation for ligation of arteries and veins. 10. Operation for aneurism. 11. Operation for removal of foreign bodies in deep tissues. 12. Operation for resection of joints without suppuration or running fistulæ. In such cases I advise figure-of-eight coil (Schlangentour) over joint. 13. Operation for obliteration of joints.

"The bad results which have been observed after too long constriction—necrosis of the margins of the wounds, slow healing, paralysis, etc.—are only caused, in my opinion, by unnecessarily tight constriction. I have in my former work called attention to the fact, and have personally witnessed, that the young men in England and Scotland, with strong muscles, developed by rowing, had too tightly applied the far too thick and too hard rubber tubing. This mistake in the commencement was made in Berlin also. I myself have never observed the above bad effects in my practice. The constrictor which I use to render the limb temporarily bloodless, as you are well aware, is not the former hard rubber tubing with chain, which I now only use in high amputations and exarticulations of the shoulder and hip-joints, but the ordinary rubber band 5 ctm. (2 inches) wide and about 140 ctm. in length, with an ordinary hook to fasten it. It answers most purposes and can, if correctly applied, even successfully compress the femoral artery close to Poupart's ligament in a strong and well-developed man. In my clinic I allow the assistants to apply the constrictor under my supervision, so that the students can acquire a thorough knowledge of the same. The important point is that the turns overlap each other evenly and with equal pressure. (See illustrations, Figs. 335, 353, 355, in my 'Military Surgery.')

"I generally apply this constriction high up; for example, operation on the forearm, constrictor high up about the middle of the arm and not close to the elbow-joint. Operation on the leg, apply to the middle of the thigh and not close to the knee-joint, avoiding consequently places where tendons and nerves lie in close proximity to the surface where the successful constriction of the parts would be interfered with. In regard to the length of time constriction could be applied to man without bad results, I have had no personal experience. In large operations I have applied constriction two hours or more without causing harmful compression of the nerves or gangrene of the flaps. I have also had reported to me from trustworthy colleagues cases where constriction was applied eight, ten, or more hours without evil results. A very interesting case of this kind you will find in vol. 22, p. 245, *Der Deutschen Zeitschrift für Chirurgie*. The constriction was applied to arrest the hemorrhage from an incised wound in the forearm, with injuries to the arteries, and remained for seventeen hours without developing gangrene or interfering much with the repair of the wound. As far as your experiments on animals are concerned, I would like to call your attention to Cohnheim's experiments, in which he demonstrated that in warm-blooded animals the circulation could be obstructed from six to eight hours without bad results.[1] Your experiments do not seem to correspond with Cohnheim's. I observe that in your second series of experiments the extremities below the constriction showed considerable œdema. As I cannot comprehend why the œdema should appear if the arteries are thoroughly constricted, a mistake must have been committed in some part of the experiment. Perhaps the constriction was imperfectly applied close above the wrist-joint, where so many tendons are located and but little soft tissue, and thus gave rise to venous congestion.

"This location, in my opinion, has the same disadvantage as constriction above the elbow or the knee-joint in man. Pardon me, my dear friend, for absorbing so much of your time, but my efforts are to give you a better opinion of the value of my bloodless operations. If I have succeeded I will be content. I have sent you copies of all of my former writings on the subject, and you will perceive that I have from time to time improved my method. I also have sent you a sample of my constrictor, which I use almost exclusively. For the elastic compression to be applied below, I now use, as before, the brown rubber bandage. Recently the first volume of the fourth edition of my 'Military Surgery' has appeared in print. I have sent you a copy, and hope in a few months to send you the second volume. By request of our Minister of the Interior, I have sent to the World's Fair at Chicago a number of illustrations of my artificial bloodless method. You are no doubt familiar with the same through my 'Handbook on Military Surgery.'

"My wife and I would like very much to go to the World's Fair this coming summer, but I am afraid it will not be possible. We both send you our heartiest and best wishes. I remain, sincerely,

"Your old friend,

"FRIEDRICH VON ESMARCH."

[1] See the above-cited Klinische Vorträge, p. 383.

It is not my intention to criticise any of the remarks made or views expressed in the above letter. When I had the pleasure of introducing the writer of the letter to my class in Rush Medical College I said, among other things, "the surgeon who has transformed the bloody operating-theatre into a dissecting-room."

This allusion alone shows my stand-point in regard to Professor von Esmarch's position to one of the greatest discoveries in surgery of the present age.

The distinguished surgeon admits himself that others resorted to the same expedient long before he startled the scientific world with his memorable paper on this subject. Esmarch's name should and always will be inseparably associated with bloodless surgery. To him, and to no one else, belongs the credit of perfecting the procedure, of giving it a permanent place in surgery, and of securing its universal adoption. At the present time different nations claim the discoverer of America, but who will convince the world that it was not Columbus? The substitution of elastic for inelastic material and the perfection of the technique entitles von Esmarch to be called the inventor of bloodless surgery. No one is more willing and anxious to accord to him this well-merited honor than I and all of my colleagues on this side of the Atlantic. In my paper I made the assertion that I regarded elastic compression not only as unnecessary as a preliminary measure to elastic constriction, but that it might become a serious source of danger. These assertions I must maintain now. I will admit that in the operations named in the letter, elastic compression could be employed without incurring immediate risks, but I must insist that it is not necessary. For more than ten years I have not resorted to it. By elevating the limb for a few minutes prior to applying the constrictor the parts are rendered practically bloodless. The only exception I would make would be in amputations at the shoulder or hip-joint as a blood-saving procedure in very anæmic persons for conditions which would not contra-indicate elastic compression. I have no doubt that if the directions given in the letter concerning the use of the elastic constrictor were carried out properly, we would hear less frequently of paralysis as one of the results of too tight constriction. The fact, however, remains that not infrequently paralysis of the musculo-spiral nerve follows as one of the immediate consequences of constriction of the arm. One such case occurred in my clinic during the present college session, and a similar case came into the hospital for treatment from the Pacific coast. In my own case the constrictor was applied by an assistant. The paralysis lasted for four weeks. In the second case the surgeon was under the belief that he had cut the nerve. Examination nine weeks after the operation satisfied me that the paralysis was caused by constriction. Perfect recovery did not take place until three months after the operation. These, and other cases which have come under my observation since writing my paper, have satisfied me that paralysis from elastic con-

striction occurs more frequently than most surgeons are willing to admit. That the blame does not rest on the method is true; but this and other complications following it should be kept in view of the inexperienced surgeon, students, and assistants in order to call their attention repeatedly to its proper application in practice.

Troublesome parenchymatous hemorrhage and marginal gangrene of flaps and wounds are other complications which I am convinced are often attributable to improper methods of bloodless operating. As stated in the beginning of this paper, it was not my intention at any time to discourage the use of elastic constriction, but to remind the profession of some of the difficulties which may follow its improper use. As far as my own experiments are concerned, it can be seen from the records that the circulation in the limb was completely arrested below the point of constriction, as during the time the constrictor was in place incisions in the distal part were never followed by bleeding until the constrictor was removed.

In all the experiments the limb was not rendered bloodless prior to the application of the constrictor, and this might account for the swelling which was noted in some of the experiments.

I regard Professor von Esmarch's letter as a valuable contribution to the history of bloodless surgery, and, as such, it will be read with profit and interest by surgeons in America.

TO WHAT EXTENT CAN EPILEPSY BE PREVENTED BY EARLY RECOGNITION AND TREATMENT.[1]

By GRAEME M. HAMMOND, M.D.,

NEW YORK.

The early recognition of epilepsy or of epileptiform seizures, especially during infancy, is of the very greatest importance, because, no matter how slight the attacks may be, the nervous system is always appreciably injured by them, and if the disease is at all persistent the physical and mental development are often retarded to such a degree as to seriously impair them both in adult life.

Gowers states that fully one-eighth of all cases of epilepsy begin during the first three years of life. My own experience leads me to consider this proportion underestimated, particularly when we take into consideration the fact that many adults, whose attacks seemed to begin at the age of puberty or even later, often give a history of having had one or two or more convulsions in infancy. These cases should be included under the heading of infantile epilepsy, as I consider the infantile convulsions were the beginning of the disease which reasserted itself in later years.

The recognition of typical epileptic seizures is a subject with which the physician is so fully conversant that any description by me would be superfluous. The loss of consciousness attended by convulsive movements effectually prevents this disease from being confounded with any other affection, with the exception, perhaps, of hysteria. But I shall not dwell upon the points of differential diagnosis; this subject has already been fully elaborated by the preceding speaker. In petit mal there are often no perceptible convulsive movements, and the loss of consciousness may be so brief as to completely escape the observation of the parent or nurse, and so, of course, the physician's attention is not called to a condition which is unsuspected. Gowers describes the following symptoms occurring with, or immediately followed by, momentary unconsciousness as evidences of petit mal: giddiness; jerks or starts of the limbs, trunk, or head; visual sensations or loss of sight; sudden sense of fear; unilateral peripheral sensations or spasms; epigastric sensations; sudden tremors; sensations in both hands; pain or sensations in the head; choking sensations; sudden scream; olfactory and cardiac sensations; sensations in the nose and eyeballs; sudden dyspnœa, and general indescribable sensations.

In the case of infants, or even with older children, it is often impossible to ascertain whether many of these symptoms exist or not. The most common symptom in children, in my experience, is a momentary fixed stare, or an equally brief rolling of the eyes upward, or a simple lapse of consciousness during which the child will suddenly grasp an article of furniture for support, or else will fall, jumping up again almost as soon as he touches the floor. The frequent falls of a child, apparently without cause, should always arouse suspicion and incite a thorough investigation.

The effect upon the infantile mind of both forms of epilepsy is disastrous; of the two, petit mal probably exerts a more pernicious influence than grand mal, possibly on account of the greater frequency of the attacks. Up to the seventh or eighth year the brain of the normal child grows in size, increases in the depth of its cortical substance, and develops in the vigor of its elements and cell life more rapidly than it does in later years.

Repeated epileptiform seizures of all kinds retard this growth, and prevent the natural development of mental activity. Even more than this is often accomplished. The mental growth is not only arrested but the mental faculties become perverted, the child illustrating these conditions by dulness of comprehension and general stupidity on the one hand, and by unnecessary attacks of rage, viciousness, and uncleanly habits on the other.

It is not at all uncommon for the parents of a child to be entirely unaware of the existence of petit mal attacks, and only have their suspicions aroused that something is wrong with the child by observing its inability to learn as other children do, or else by repeated acts of causeless viciousness.

Another most important point which renders the early recognition of epilepsy of paramount importance is the tendency of idiopathic epilepsy to become organic. I believe that idiopathic epilepsy is at first functional and can, in the majority of cases, be readily cured if it is recognized soon after it begins and if appropriate treatment is inaugurated and persistently carried out. But an epilepsy that begins as a functional disease has a strong tendency to become organic, especially in the undeveloped brain of the child.

Every time a fit occurs the delicate brain-cells are irritated to a profound degree. Repeated attacks lead to increased and longer continued irritation, and finally to structural changes in the cells themselves. The epilepsy is then organic. The abnormal condition of the cells is sufficient to provoke attacks, and although a great deal can undoubtedly be done to ameliorate the severity and frequency of the seizures, it is rare, if ever, that a cure in such cases is accomplished. Therefore the earlier the fact is recognized that a child is suffering from epilepsy, and the sooner treatment is begun after such recognition is made, the better the chance is for the complete repression of the attacks, and the ultimate recovery of the patient. In such a serious disease as epilepsy, in which the preservation of the integrity of the mind and the vigor of the body depend so greatly upon the early recognition and prompt treatment, too much stress cannot be laid upon the advisability of properly instructing parents or others who have the care of infants. This instruction should come from the family physician. In all cases where children are born to parents of a neuropathic temperament: when one or the other has suffered from epilepsy, syphilis, or scrofula; or in whose family insanity has shown itself, the physician should carefully explain what the symptoms of petit mal are, and impress upon their minds the necessity of being careful and vigilant. This should, of course, be performed with tact and discretion, so as not to occasion unnecessary apprehension or alarm. In all cases, even when the parents and child are presumably healthy, similar instruction will not be amiss and will give the parents a proper consideration of the gravity of a condition which they might otherwise be-

[1] Read before the Section on Pediatrics of the New York Academy of Medicine, April 14, 1893.

lieve to be trivial. Parents are fairly well informed in regard to the initial symptoms of most of the diseases of infancy, but are almost invariably grossly ignorant concerning the symptoms of a disease which is certainly as serious in its consequences to the child as the majority of the diseases of infancy.

The treatment for the prevention of epileptic seizures is almost as important as the treatment for the relief of the spasms after they have once become established. In the majority of instances convulsions result from severe reflex irritation acting upon a system made susceptible by hereditary influence. But in a smaller proportion of cases hereditary diseases are the direct causes of epilepsy. Such affections as hereditary syphilis, scrofula, and rickets, induce in most instances a condition of defective nutrition and development of the central nervous system which, in itself, is often sufficient to induce epileptic seizures without any peripheral irritation. Whether it is possible or not to entirely eradicate these diseases from the system I cannot positively say, but I am sure that their early and energetic treatment will so modify them that the pernicious influence which they exert on the nervous system can be minimized to such a degree that the probability of epileptic seizures is reduced to a minimum.

The convulsions of teething, or from indigestion or other irritations of the gastro-intestinal tract, are often considered lightly by the physician and parents, particularly if the child has only had one or two attacks, and if these were mild in character. Nothing, however, can be more erroneous. An epileptiform seizure, no matter how slight it may be, should always be regarded as a serious matter, not particularly on account of any immediate injury, but because it usually indicates the existence of a powerful neuropathic predisposition, and the strong probability that the child will have subsequent epileptic seizures unless means are adopted to prevent them. A fit apparently produces changes in the cerebral centres which favor and facilitate the occurrence of other fits. The second fit may not soon follow the first one; on the contrary, it may not appear for weeks or perhaps for several months, and when the parents are congratulating themselves on the excellent health of the child, but it finally does come, and after it others, until the epileptic condition becomes firmly established. When an epileptic seizure of any kind makes its appearance treatment should be adopted at once. The convulsions from teething, from worms in the intestinal canal, and from indigestion, are too often regarded, even by the practitioner, as matters of no very great importance. They assure the parents that it is of little consequence, and treat the case by lancing the gums, administering a vermifuge, or regulating the diet, as the case may be, and then, if the convulsion is not repeated, consider they have accomplished all that is necessary. It is not at all uncommon for me to ascertain, in both private and hospital practice, that the youth of either sex, or even the adult, who is suffering from epilepsy first had convulsions in infancy for which they received no regular treatment. I am convinced that such cases, if they had been properly treated from the first, could readily have developed into healthy men and women. In the first place, it is recognized that such irritations of the nervous system as I have just spoken of, are not in themselves sufficient to cause epilepsy. There must be a strong neuropathic predisposition. Recognizing this condition, the treatment must not stop at simply removing the cause which induced the fit. Such an attack should be a warning to the physician that this neuropathic predisposition exists, and that it may show itself later in life unless it be eradicated by proper treatment. The treatment cannot always, therefore, be confined to the use of medicines. As important as the medicinal treatment is, the eradication of the neuropathic tendency is often of equal, if not of greater, moment. There is a strong inclination at the present time to develop the mind of the child and to neglect to a great extent proper physical culture. Regarding the propriety of this course in reference to healthy children opinions may differ, but in the case of a child who has had any form of epilepsy, particularly if there is any tendency to repetition of the attacks, there should be no room for doubt. In no class of cases is the quotation "*mens sana in corpore sano*" more applicable. The careful and systematic development of the body by appropriate exercise continued year after year: the equally careful and cautious training of the mind; the avoidance, particularly in early years, of severe or prolonged mental application—either at school or at home—the requisite number of hours of sleep, and the wise regulation of the diet, are all factors, which, when put into active force, and continued for years, cannot fail to develop a superb constitution and a healthy nervous system, the possession of which unquestionably minimizes the influence of hereditary predisposition. What matters it if the child does not grow up well versed in languages and mathematics, so long as the physical and nervous systems are in the best possible condition for resisting disease, particularly such a disease as epilepsy? Let the cultivation of the mind come later, after a solid physical foundation has been secured.

It is far better for a child to have a strong and vigorous body and to be free from epilepsy, even if he only has a moderate education, than it is to run the risk of developing epilepsy, which may become permanent, simply for the sake of mental attainments.

The diet in infantile epilepsy is to my mind a most important feature of the treatment. In the epileptic, the various organs concerned in digestion do not excrete their juices in sufficient quantities to properly perform their functions. Digestion is more or less controlled or influenced by cerebral conditions, and when a depressed mental state is continued for a length of time, as it is in epilepsy, the digestive organs are decidedly impressed, and become habitually sluggish in their actions. Hence the ingestion of food in large quantities or of food which is particularly rich in some substance which requires concentration of any one or more elements of the digestive juices must be avoided. Both theoretically and practically, the ideal food for infantile epilepsy must be one that contains small quantities each of proteids, fats, and carbohydrates. Milk which has been skimmed contains about three per cent. of proteids, less than one per cent. of fats, and about four per cent. of carbohydrates. Here, then, is a food which contains all of the elements requisite for nutrition in small enough quantities to be acted upon even by a very small proportion of the normal quantity of digestive juices. Improper diet for infants is particularly common among the lower classes. It is not at all uncommon to find mothers feeding infants only one year old on the same food that they themselves eat. Over-feeding is just as much to be deprecated in the infant epileptic as improper feeding. Most mothers consider that every time her baby opens its mouth, food, and as much food as the child can take, must be put into it. Healthy children may stand the treatment, though their digestion will suffer from it later, but epileptic infants must be treated differently. I seldom, if ever, allow anything but peptonized and sterilized skimmed milk for epileptic children until they are nearly three years of age. At that age, even with a liberal allowance of milk, the child does not receive a sufficient quantity of nitrogenous food, and yet it is just this element in the diet of the epileptic child which has to be omitted. The gastric juice converts proteids or nitrogenous foods into peptones, which are readily absorbed. But with a diminished quantity and altered quality of gastric juice the proteids are not acted upon to any great extent, and hence, if nitrogenous foods are given, indigestion follows and greatly increases the liability of the patient to an epileptic seizure. Meats, albuminous and gelatinous foods, which are all nitrogenous, must therefore be eliminated from the diet of the epileptic. It is this class of food, particularly the meats, which gives muscular strength and vitality to the human organism. If, therefore, nitrogenous food which has artificially been converted into peptones can be intro-

duced into the system through the stomach, its absorption and assimilation will be completed without the necessity of drawing upon and exhausting the limited quantity of gastric juice which the stomach is capable of secreting.

Recently I have used prepared peptones given in connection with the milk diet, not continuously, but occasionally and for several days at a time. In this manner I have given nitrogenous food to those cases that particularly require it, and in a form which obviates all danger of gastro-intestinal irritation. As the child grows, and if the epileptic seizures are thoroughly under control and none have appeared for considerably over a year, the most readily digestible nitrogenous foods may be cautiously and gradually given, but the quantity allowed at any one time should always be limited.

In regard to the medicinal treatment of epilepsy I have very little to say. The bromide treatment, with which you are all so familiar, seems to me to possess advantages which are not found in other remedies. After a careful trial of the numerous drugs for which a claim for any beneficial effect can be substantiated I have been forced to conclude that though many of these unquestionably do ameliorate the epileptic condition, there is not a single one of them from which the same uniform, rapid, and permanent effects can be obtained as from the bromides when wisely and judiciously employed. I make this statement with a single exception. I have seen some few cases, particularly cases of petit mal, in which the bromides, instead of affording relief, undoubtedly aggravated the disease. In one case that comes to my mind at this moment, the patient, a girl, ten years of age, was having from five to ten petit mal attacks daily. When I first saw her she was given eight grains of bromide of sodium three times a day. The next day eighteen attacks were counted, on the second day she had thirty-seven, and on the third day more than fifty. The bromide was then stopped and strychnia and phosphorus were administered. The attacks rapidly diminished in frequency and in a week ceased altogether and have not since returned, though she has had no medicinal treatment for six years. Several other similar cases have come under my observation. The last one, a girl of nine, sent to me recently by Dr. Morris of this city, had been taking bromides for several weeks before I saw her. Notwithstanding this, she was rapidly becoming worse, and it was only after the bromides were discontinued and strychnia and phosphorus substituted that improvement began. I have observed in these few cases, that all, without exception, were anæmic and in wretched physical condition. It occurred to me that the cerebral irritation might be induced by an abnormal condition of the blood, either quantitative or qualitative, which condition was aggravated by bromides and ameliorated by strychnia, phosphorus, and similar preparations.

But with this single exception I have obtained better results from bromides than from any other remedy, and in cases where the bromides fail other remedies have not, in my experience, proved of any greater efficacy. The only points that I desire to emphasize are the length of time medicinal treatment should be continued and the daily quantity of bromide which should be administered to secure the best results. If an infant has had only one or perhaps two or three attacks, I would certainly continue treatment until fully a year and a half or even two years had passed without any evidence of epileptic seizures. When the attacks have been of frequent occurrence and show a great degree of persistency, the treatment should be continued until all signs of the disease have been absent for at least four years, and even then for the next two years the bromide should be given for five or six weeks at a time with periods of rest of two or three months in between. The quantity of bromide given to a child should be just enough to control the paroxysms and no more. Bromides have their deleterious effect upon the system when given excessively. In organic epilepsy it is often necessary to give very large doses in order to mitigate the severity of the disease, but in purely idiopathic cases much smaller quantities are efficacious, and it is better to avoid as far as possible the muscular debility, stupidity and general physical and mental torpor, all of which conditions retard the proper development of the body and the mind and without controlling the epileptic seizures any more than more moderate doses would do. From five to fifteen grains administered three times a day, according to the age of the patient, will usually be sufficient to control the paroxysms without affecting the progress of physical and mental growth. Although the medicinal treatment of epilepsy is above all others most important, and by it alone many cases can be cured, it will be found, in other cases, that the physical and constitutional training are of inestimable service and that in all cases the dietetic treatment greatly facilitates recovery and diminishes the tendency to further attacks. The ideal and most successful treatment must comprise a combination of these methods, and if begun early in the course of the disease the majority of cases can be cured.

THE LITERATURE OF SEA-SICKNESS.

By J. A. IRWIN, M.A. Cantab.; M.A., M.D. Dub; M.R.C.S. Eng., Etc.

NEW YORK.

Sea-sickness as one of the earliest noted, most constant, and most palpable of human infirmities, has a literature which, if not particularly instructive to the practical student, is at least as ancient and comprehensive, and probably more closely associated with the humanities, than that of any similarly unimportant derangement. It is remarkable, then, that the modern writer upon this subject so persistently ignores the record of previous investigation, and usually presents as new theories and suggestions —the outcome of his individual experience and cogitation—many which are centuries old, and usually have been long since exploded, or found impracticable for general use.

Even the discussion recently inaugurated by an authority no less distinguished in another department of medicine than Dr. Graily Hewitt,[1] is by no means exempt from this reproach. The connection of sea sickness with visual disturbance was fully discussed by Gilchrist[2] in 1757; by Darwin,[3] 1794; by Miller,[4] 1808; by Bell, Johnson, and Maxwell[5] about 1826, again by Allard,[6] in 1829, and subsequently by many others. In a paper published by the writer,[7] in 1881—intended to prove that the etiological method of all motion-sickness, or *kinesia*, was a disturbance of the special function of equilibration located mainly within the semicircular canals of the internal ear—there occurs the following paragraph: "That sea-sickness can exist independently of visual impressions is easily demonstrable; there can be no doubt, however, that these impressions exercise an important influence in some cases. Ordinary visual vertigo depends upon either an exhaustion of the optic mechanism, or a discrepancy between the visual impressions of the moment and the conceptions formed in the central organs of equilibration. In the visual vertigo of sea-sickness there appears to be a discord between the immediate or true visual impressions and a certain visual habit, or visual sense of the fitness and order of things, which passes into consciousness as a distressing feeling of uncertainty, dizziness, and nausea."

Erastus Darwin promulgated the view recently advocated by Dr. Hewitt,[8] that visual disturbances are the principal cause of sea-sickness; and, like him, constructed a swinging apparatus, which, although originally intended for the cure of insanity, was incidentally to be used for "a week or two before going on board" as a prophylactic against sea-sickness. Miller recommended the pre-

[1] Brit. Med. Jour. [2] Use of Sea-voyages.
[3] Zoönomia, vol. i.
[4] New York Med. and Physical Jour.
[5] Edin. Jour. Med. Sci., and Med. and Chir. Rev., 1826.
[6] Thèse pour le Doctorat, à Montpellier.
[7] The Lancet, November, 1881. [8] Brit. Med. Jour., 1892.

paratory exercise of "turning rapidly on one foot," or "whirling in a chair or small bed suspended to a simple machine," etc.; and, that while on board, "the patient should place himself in a horizontal position, shut his eyes, and lie perfectly still." Aronssohn[1] suggests "gradually practising on an oscillating plank:" and Rey[2] expresses the simple and oft-repeated counsel, "*fermez les yeux et prenez patience.*" In 1796 Autenrieth[3] discusses the statement of Adanson[4] that short-sighted persons are, in consequence of their infirmity, less liable to sea-sickness; while James,[5] of Harvard, has argued that a similar immunity existed among deaf-mutes. The experiments with rotatory machines by Crum-Brown,[6] of Edinburgh, and Mach,[7] of Prague have established beyond question the association of vertigo and nausea with perverted visual impressions the result of motion. Founded upon the theory of visual causation many of the older writers have also recommended fixing the gaze upon some object distinct from the vessel: a plan, however, which would scarcely be applicable during ocean voyages, when, as a rule, there are no such objects in view.

Other somewhat eccentric and inconvenient occupations—such as balancing a glass of water, continuously humming popular airs, and timing one's respirations to the movements of the vessel—have had at various times warm advocates. Many years ago De Cassagnac,[8] having tested the latter method, expresses his disgust: "Mais c'était quelque chose de si odieusement ridicule de m'étudier à devenir une montre de Genève, que je donnai le remède au diable, comme cent fois pire que le mal."

Inventions intended to mechanically diminish motion, and so avoid sea-sickness, have been many, and in a few instances interesting; but, from the "*Ile Flottante*" of Tellier[9] designed to carry trains across the Channel, the Bessemer saloon, the swinging state-room in an earlier White Star steamer, the Castalia, and even the twin-ship, Douvre-Calais, down to the *Fauteuil-de-Mer*, of Derotrie,[10] the *Cadras suspendus*, of Pellarin,[11] and innumerable cots, hammocks, and patented berths—all have proven more or less failures or been long since entirely abandoned. In the enormously increasing size of the modern ocean steamer seems to rest the only hope from this direction.

Another prophylactic and remedy recently resurrected is the belt or abdominal compress, a device of time-honored celebrity, and long a favorite among French writers. Kerauderan,[12] a well-known authority, says in 1812, "La compression abdominale paraît donc le moyen le plus sûr de modérer du mal de mer." Fonssagrives,[13] Levicaire,[14] Le Grand,[15] Jobert[16] of Brussels, and many others have reiterated this opinion. The "*belt of Vasse*" was recommended by Forget,[17] in 1832, and about 1853 Levilly's "*Thalazone*"—a leather belt fitted with steel plates and screws so that pressure could be altered at will—obtained a high, but short-lived reputation. Even the versatile Montaigne[18] relates how "les médecins m'ont ordonné de me presser et cengler d'une serviette le bas du ventre." The admission, however, of the last discoverer of the merits of this procedure,[19] that "the hint was obtained from a gentleman who was previously a martyr to sea-sickness, but now in his frequent journeys across the Channel makes them with comfort and triumph, and, needless to say, with perfect immunity from sea-sickness," has a special interest as recalling the similar observation of the illustrious Bacon,[1] recorded nearly three hundred years ago: "Equidem memini quendam Anglum," etc.; or, as translated in a quaint English edition published in 1638, "I remember a certaine English-Man, who, when he went to Sea, carried a Bagge of Saffron next his Stomach, that he might conceale it, and so escape custome: And whereas he was wont to be always exceeding Seasick; At that time he continued very well, and felt no provocation to vomit"

The value of stimulant, and usually in the form of wine, has been noted from early times. In the famous "Regimen Sanitatis Salernitatem," supposed to have been written for Robert, Duke of Normandy, by the medical monks of Salerno, about the beginning of the twelfth century, there occur these lines, which also possess a peculiar interest although from a literary rather than a medical standpoint:

"Nausea non poterit quemquam vexare marina,
Antea cum vino mixtam si sumpserit illam."

Owing to an oversight of the learned composers, or a mistake of the early transcribers, or possibly an intentional ambiguity because something particularly nasty was intended, it is left uncertain to what the *illam* refers; or exactly what commodity, in admixture with wine, is advised as prophylactic against sea-sickness. As a consequence many of the subsequent editors of this extraordinary work, which has gone through probably not less than two hundred editions, have altered the second line so as to express that which in their individual judgment would seem best for the purpose indicated. Most of the older ones favored sea-water, and hence we find: "Undam cum vino mixtam qui sumpserit ante;"[2] upon which rendition the comment of Curionem[3] is practical and amusing: "Nempe, si divites illi fuerint, ut per dies aliquot antequam navem conscendant, vinum suum aqua marina temperent; si pauperes aquam marinam absque mistione bibant!" De Renzi[4] renders the line, "Anteà commistam vino qui sumpserit *istam*," but without explanation. Others recommended some herb not specified, thus: "Si prius hanc vino commixtam sumpserit *herbam;*" but the French editors[5] almost invariably designate *absinthe:*

"Prêt à vous embarquer buvez de vin d'absinthe
Si du vomissement vous redoutez l'atteinte."

In "The Englishman's Docter, or The Schoole of Salerne, sold at the little shoppe next Clifford's Inne Gate in Fleetstreet, 1607," the translator still further elaborates the original *illam:*

"If in your drinke you mingle Rew with Sage,
All poyson is expel'd by power of those,
Who would not be sea-sick when seas do rage
Sage-water drinke with wine before he goes."

Next to stimulants, sedatives and narcotics have been most generally recommended. The bromides, Indian hemp, belladonna, opium in every form, chloroform, chloral, chlorodyne, chloralamid, ether, and almost all similar drugs have been enthusiastically advocated; and no doubt are often useful, especially at the commencement of short voyages. But even in this line of treatment there is nothing new, for in 1772 Boissier[6] remarks, "Sunt qui usum narcatorum septima quavis hora suadent."

In olden times sea sickness was not regarded as an unmitigated evil, and by many writers[7] was credited with curative influence in consumption, insanity, dropsies, tumors, apoplexy, elephantiasis, and "many diseases of the head, breast, and eyes." Even in our own times voyages have been undertaken with the sole object of inducing vomiting; and, in some instances, payment made conditional upon that effect being produced. Few are

[1] Union Méd., 1860, vol. iii.
[2] Nouv. Dic. de Med. et de Chir., vol. xxi.
[3] Jour. der Practischen, etc., vol. ii.
[4] Voyage to Senegal, 1759.
[5] Cambridge, Mass., 1882.
[6] Jour. Anat. and Physiology, 1874.
[7] Wiener Sitzungsberichte, November, 1873, and Med. Centralblatt, 1875.
[8] Voyage aux Antilles.
[9] Rey: Nouveau Dic. de Méd. prat., vol. xxi.
[10] Jour. (Méd.) de la Soc. Académique (Loire Inf.), vol. xxxvi.
[11] Le Mal de Mer. Paris, 1851.
[12] Jour. de Méd., Chir., et de Corvisart, t. xxiii.; Diction. des Sciences Méd., t. xxx., 1818.
[13] Traité d'Hygiène navale, 1856.
[14] Lancet, August, 1853.
[15] Thèse à Montpellier, 1814.
[16] Compte-rendu des Trav. de l'Acad. des Sciences, lxxx.
[17] Médecine navale, 1832.
[18] Œuvres compl. Paris, 1836.
[19] British Medical Journal, September, 1892.

[1] Historia Vitæ et Mortis.
[2] Villa Nova, 1480; Joannen Curionem, 1605; Sylvius, 1649.
[3] Frankford, 1605.
[4] Naples, 1852.
[5] Levacher, 1779; Macer, Moreau, et al.
[6] Nosologica Methodica.
[7] Galen, Celsus (Lib. iii. and iv.); Aretæus (de curat phthise); Avicenna (Lib. i.); Oribasius (Med. Col., Lib. iv. and vi.); Pliny (Nat. Hist. Lib. xxxi.); Mercurialis (De Arte Gymmastica).

aware, however, that *Kinetia*, or Motion sickness has actually been applied as a method of legalized punishment; yet Steinheim[1] says, "I remember having seen in my childhood an old German good natured way of punishing children who had committed small robberies, especially of vegetables and fruits. They were locked up in a small sentry-box hanging perpendicularly on two hinges beneath the eaves of the town-hall, so that it could be turned. The little thief after being shut in was turned by the policeman with the greatest rapidity, until, ανω and κάτω, he had given a disgusting spectacle to the laughing mob."

It has often been half-jokingly remarked that the Frenchman's inherent dread of sea-sickness should be classed among England's strongest bulwarks against invasion. In which connection it may be interesting to learn that not only upon the sea but also in warfare on land this Gallic weakness has stood the Briton in good stead. For when, about the beginning of the century, Napoleon contemplated the formation of a dromedary corps for the war in Egypt, General Carbuccia,[2] to whom this duty was assigned, reported the serious disadvantage which would accrue from the swinging gait of that animal causing sea-sickness among the soldiers entering battle!

It is also interesting that of the various forms of motion observed to induce kinetia, the wave-like undulations of earthquake are among the most unfailing. This was particularly noticed during the seismitic disturbances which occurred in New England and Maryland about the middle of the last century, and again at the Sandwich Islands in 1868;[3] but is a matter of common knowledge in countries where earthquake is of frequent occurrence.

The writer may scarcely say so, since he too lays claim to having first demonstrated the true pathology of sea-sickness, as well as giving it and similar forms of motion-sickness a new and more rational name (*Kinetia*), and explaining other previously unstudied phenomena connected with sea-voyaging;[4] but, so fragmentary, contradictory, and generally unsatisfactory is the literature of this subject that the casual reader might easily conclude that the aggregate of our present knowledge is still compressible into the original assertion of Hippocrates, that "sailing on the sea proves that motion disorders the body:"[5] while of the remedies suggested not a few recall the oft-quoted reflection of Rabelais, "Oh! que trois et quatre fois heureux, sont ceux qui plantent des choux; ils ont un pied en terre et l'autre n'en est pas loin."

A CONTRIBUTION TO THE STUDY OF NON-DEFORMING CLUB-FOOT.

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On February 26, 1885,[6] there was read before the New York Orthopædic Society an exhaustive and elaborate paper upon the subject of non-deforming club-foot.

It was claimed by the author that the condition had not previously been described, that it occurred with comparative frequency, and presented symptoms of sufficient importance to make it worthy the attention of orthopædic surgeons.

Since the date of that paper it has been my fortune to see a number of these cases, both in my service at the New York Orthopædic Dispensary and Hospital and in private practice, and as a result of these observations I offer a short paper which may be considered a small contribution to the study of the malady in question. There are several reasons which seem to justify me in bringing the subject again before the profession. So far as I know, nothing has been written upon it since the paper referred to, and sufficient time has now elapsed to prove or disprove the truth of the author's statements by the observations of others. In my opinion also, the difficulty is quite a common one: it occurs in all classes of society, in all cases causes great inconvenience to the patient, in many produces great pain, and in some amounts to a total disability. Moreover, the general practitioner seems to know little or nothing about it. The cause of their trouble is never suspected by the patients themselves, and they go on suffering for weeks, months, and even years; while, under proper treatment, relief is immediate and cure certain.

While there was a certain amount of criticism concerning the term Non-deforming Club-foot, no more satisfactory one was suggested, and it has stood since then to express the condition described.

The points made in the paper were briefly these: that in a certain number of individuals there existed a sufficient shortening of the gastrocnemius muscle alone, or accompanied by a contraction of the plantar fascia, to prevent complete flexion at the ankle-joint, the limitation being usually at about 90°; that this is a true pathological condition resembling that found in the pes equinus, but that either no deformity is present, or it is so very slight as to escape casual observation, and consists then only in an exaggeration of the arch of the foot and a prominence of the ball: that this condition produces symptoms which vary in degree between an awkward gait with corns and callosities, and fatigue after walking short distances, to severe inflammation of the tarsal, medio tarsal, or metatarso-phalangeal articulations, accompanied by pain and by cramps extending up the leg and thigh; that these symptoms are directly due to the shortening of the gastrocnemius and plantar fascia, for as soon as these are lengthened and normal flexion at the ankle restored, the symptoms disappear.

In my own experience I have found these points fully verified.

Since 1885 a record of these cases has been kept at the New York Orthopædic Dispensary and Hospital, and I have taken the trouble to look them up in order to ascertain the relative frequency of their occurrence in dispensary practice. It must be remembered that those who came presented themselves on account of pain or inability to walk, and therefore they represent the severest types; also that they came for the relief of their pain or disability, and were not accidentally discovered in examination for other diseases or deformities. The list, too, does not include those found among the large number of patients with infantile paralysis, many of whom have typical non-deforming club-foot on the side which was not paralyzed, or has recovered.

The total number of cases was 29. Of these 4 occurred under the age of 10 years, 6 between 10 and 20 years, 14 between 20 and 30, 3 between 30 and 40, and 2 over 40; 13 of the number were males, and 16 females; in 17 one foot was affected, and in 12 both. These figures confirm the statement of the author that the trouble is more common in females and in young adults, and that one foot is more often affected than both.

The causes which might produce non-deforming club-foot were given as follows:

1. Poliomyelitis.
2. Simple malposition or habit, such as would occur in long confinement in bed.
3. Traumatism, usually a sprain.
4. A sequela of the infectious diseases in children.
5. Due to trophic disturbances.

This cause may be termed idiopathic, in the sense that the trouble comes on slowly and without any exciting cause so far as the patient is concerned.

The great majority of cases fall under the third and fifth heads, possibly with the exception of the first—viz., poliomyelitis; but these latter cases I am not consider-

[1] Wörterbuch der Medicinischen Wissenschæften, 1843.
[2] Fonssagrives: Traité d'hygiene naval. Paris, 1856.
[3] Lewis: Phil. Trans., vol. viii.; Michell, vol. xli.; De Varigny, Paris, 1874.
[4] Lancet, November, 1881. Influence of Sea-voyaging upon the Genito-uterine Function. New York, 1885.
[5] Sec. iv, Aph. xiv.
[6] MEDICAL RECORD, 1885, vol. i.

ing in this paper. Those patients who seek relief for pain or fatigue in walking generally give a history of slight traumatism, or can attribute the difficulty to no special cause, but only know that for some time they have had pain and disability, especially if required to be on their feet more than usual.

In the former case the traumatism is usually a slight sprain or turn of the ankle, which may not be sufficient to confine the patient to bed. There is not much pain at the time, and they go about with a limp favoring the affected member. The application of liniments and some rest give temporary relief, but the stiffness and tenderness continue; there is slight swelling underneath the malleoli after walking, and soon the pain and tenderness are transferred or extended to the medio-tarsal and metatarso-phalangeal region of the foot.

An examination of these cases will show a very decided limitation of flexion at the ankle-joint. It will be impossible to bring the foot up to more than a right angle, even on using considerable force; and this may be true, even when flexion causes no pain or voluntary resistance on the part of the patient. In many cases the shortened gastrocnemius has probably existed prior to the accident, the condition being one which greatly favors sprains and twists; so that what is considered a cause is, in reality, a result of a condition which has existed for a long time without the knowledge of the patient.

I recall one case in particular, that of a young woman who was obliged to be very careful in walking over any surface which was at all rough, on account of the liability to turn her ankle. On one occasion she received quite a severe sprain, which persisted long after the usual time for the healing of such injuries, and an examination showed a markedly shortened gastrocnemius. As soon as this was corrected the pain and swelling disappeared, and she has since been able to walk much more freely. This is the usual history of these cases. Under treatment by rest, liniments, etc., they are very intractable; but if the shortened muscle is stretched so as to allow complete flexion at the ankle, and consequent restoration of the normal relations and functions in the tarsus, the cure is a matter of only a short time.

The most interesting class of cases are those which present themselves, giving no cause—healthy, strong, young adults, who for years have shown no symptoms, or, perhaps, only a peculiar walk, and then suddenly are afflicted with pain and cramps which incapacitate them more or less from active exercise.

In regard to the etiology of these cases one must plead ignorance. It may be that some are congenital; *i.e.*, if the feet had been carefully examined at birth, flexion would have been found to be imperfect. In other words, one of the conditions of true club-foot—viz., a short tendo Achillis—may have been present, but to so slight a degree as to escape notice, and only to be discovered after several years on account of the symptoms produced.

The author of the paper refers to these cases, and thinks they may be produced by trophic changes which interfere with the growth and development of certain muscles, and traces an analogy to true lateral curvature.

We may never be able to determine satisfactorily the etiology of this condition, but there is no doubt of its existence in a larger proportion of cases than is generally imagined, and that it frequently produces symptoms which call for relief.

The report of one case will be sufficient to illustrate the majority.

Mrs. L——, thirty-eight years of age, came to consult me in May, 1890, for pain and cramps in the feet and legs. She had been slight as a girl, but had increased in weight after marriage. Has two children, and her general health has always been very good; is active and on her feet a great deal. The pain complained of began nine years ago, and made its appearance first in the metatarso-phalangeal articulations of both feet. At first the pain came only occasionally, and after unusual fatigue, but before long increased in frequency and severity, and then was followed by cramps extending up the calves of the legs and sometimes to the thighs. For the past three or four years she had been unable to wear high shoes, and in her shopping tours had been obliged to retire frequently to the ladies' room in the stores to remove her shoes and rest her feet.

She planned her day so that she would do only the walking that was absolutely necessary. Her family physician had accused her of wearing tight shoes, and she had tried all kinds, even consenting to wearing a pair of Kahler's, but had obtained no relief.

A casual examination of the feet showed no abnormality whatever. The swollen and inflamed big-toe joint and unsightly corns and callosities which often accompany these cases were not present. The only things noticeable were a slight increase in the arch, and a prominence of the ball. But when I asked her to flex the feet she could not bring them up to a right angle, though the toes were fully extended in the effort. By manual force it was impossible to obtain more than ninety degrees flexion. When she stood on the floor with the knees straight she could not raise the ball of either foot from the floor.

I applied traction for fifteen minutes to each foot by means of Dr. Shaffer's traction shoe, stretching the tendo Achillis and plantar fascia as much as she could endure. She said at once that she could walk easier. Traction was applied by myself daily for three weeks, and then at home by an attendant for two weeks more, when she went into the country.

While she was away she climbed mountains, walked a great deal, and took long excursions by carriage, etc., with comfort—something she had not done for years. Owing to an accident to her own traction shoe, she was deprived of its use until her return to the city. She then had some pain and occasionally a cramp, but a few applications relieved her completely. Since that time she has used the shoe occasionally at times when obliged to do a great deal of walking. I saw the patient recently and found flexion to be very nearly normal. She never has cramps in the legs or pain in the feet when walking. If she sits in one position for a long time, as at a dinner or at the theatre, she has some pain at the base of the toes; but I am inclined to think this is due to interference with the circulation from pressure on the edge of the chair.

My experience has been that great relief is obtained after a few applications of the traction shoe, and as soon as normal flexion is secured the symptoms disappear.

I have seen a few cases that presented symptoms similar to non-deforming club-foot, in which stretching did not relieve the pain; but in all of these the trouble was of rheumatic origin, and the inflammation was of a more acute type than is found in the non-deforming club-foot. In these cases it is well to proceed cautiously, and, if the pain is increased by traction, to stop it until the inflammatory symptoms subside.

In estimating the amount of flexion at the ankle in any case, it is necessary to keep the knee extended and the foot in a straight line with the tibia; for if the foot is abducted the motion which is obtained at the medio-tarsal joint, and which is considerable, will deceive one greatly as to the degree of flexion.

The conclusions reached from observation of these cases are—1, that they occur with more frequency than is generally supposed; 2, that in all cases where complaint is made of persistent pain in the feet, especially about the metatarsal region, the conditions of flexion at the ankle joint should be carefully noted; 3, when flexion is limited to ninety degrees, or perhaps two or three degrees beyond, traction should always be applied until normal flexion is obtained—viz., ten to fifteen degrees beyond a right angle.

I am very confident that a more careful observation on the part of general practitioners in this regard will lead to the relief of much suffering.

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Progress of Medical Science.

The Chemistry of Digestion.—Dr. Winter has made a special study of this subject. He maintains that the origin of hydrochloric acid in the stomach is far from being definitely established. According to him, when the stomach is empty it has neither hydrochloric acid nor special cells in which this acid could be constantly secreted previous to taking food. The hydrochloric acid which is found in the digestive fluid, either free or combined with organic substances, is a body produced in the stomach when it is excited by food or by other artificial excitement, and is the result of the action of the glandular elements in the digestive solution on certain metallic chlorures found in the blood. He states also that the free form of hydrochloric acid always appears subsequently to the combined organic form. The artificial solution of the cells of certain portions of the gastric mucus gives rise to an acid liquid which does not contain a trace of free hydrochloric acid; but this acid is in a remarkable proportion to the total quantity of phosphorus in the liquid. All the elements which can be found in the gastric fluid vary constantly with the different periods of digestion, while we do not know by what influences these variations are determined: whether they are regular and continuous, or without order and irregular. At present, his researches are directed so as to determine (*a*) if the facts revealed by the analysis are developed in accordance with fixed mathematical laws; (*b*) the facts of digestion, of secretion, and of cellular solution constitute functions independent of one another, but united among themselves by chemical, mechanical, or physical relations; (*c*) that one of the principal factors of this union is the concentration which is effected in the stomach—that is to say, the phenomena of osmosis, which is seated in this organ. —*The Sanitarian.*

Gastric Crises in Floating Kidney.—The gastric crises which sometimes occur in cases of floating kidney were recently discussed at a French medical society. Dr. Mathieu had observed patients in whom there had been severe attacks of vomiting some ten or twelve times a day for a fortnight or even more. There was a strong resemblance to some of the gastric crises of locomotor ataxia. There was severe abdominal pain. In a few cases there was enough gastric dilatation to suggest constriction of the pylorus. It was very possible that the symptoms resulted from a temporary displacement of the kidney and more or less torsion of its pedicle. The best treatment for floating kidney he had found to be rest and the abdominal bandage, with a large and soft pad over the kidney. At the time of the lighter gastric crises he had used chloroform, cannabis indica, and a milk diet, with some success, but for the more severe cases he had not found much relief by drugs. Of surgical attempts to fix the kidney he believed there had been twenty-six successes and eleven failures. Dr. Legendre agreed that the displaced kidney probably pressed sometimes upon the pylorus and by that means excited the vomiting, but he did not think the vomiting could always be stopped by getting the kidney into its right place again. Dr. Guyot had observed for forty years cases of floating kidney, but had not found gastric dilatation or fits of vomiting. Dr. Rendu gave an account of the case of a lady in whom there had been many gastric crises. At first they were considered to be due to a pre-ataxic condition; later, when they were accompanied by jaundice, to gall-stones; and finally, when the jaundice no longer recurred, to floating kidney. A surgical operation to fix the kidney was contemplated, but before it was performed the crises ceased completely, and the problem of the origin of the symptoms remained unsolved.—*Le Progrès Médical.*

Should we Treat Fever?—Dr. S. T. Armstrong has published a consideration of this topic in the *Medical News*. In his review of the question whether it is desirable to relieve pyrexia by the administration of antipyretics, the following points have been held in view: 1. That fever is the expression of some disturbance of the thermal centres. 2. That while this disturbance may be traumatic, it is usually the result of the existence in the organism of certain autogenetic or heterogenetic (infectious) products that have the same affinity for the thermal centres that certain vegetable alkaloids have for certain cerebral centres. 3. That fever does not exercise any beneficial effect in limiting an infectious process; this is a fact that has been known clinically for years by the occurrence of cases of infectious disease that pursued their usual course without any rise of temperature. 4. That it is the general experience of clinicians that the relief of fever exercises a beneficial influence on the general condition of the patient, though the apyrexia does not indicate that the cause of the pyrexia has been removed. 5. That in many febrile conditions the causative principle has produced a thermotaxic paresis that is at once relieved by some suitable antiseptic. 6. That in continuing the employment of antipyretics we are not losing sight of the possibility of obtaining, either synthetically or derivatively, compounds that will, when administered in the specific diseases, have the same inhibiting influence on the further development of the microorganisms of these diseases that certain alexins, toxalbumins, or toxins have. The action of such compounds should be as specific in each infectious disease as is the action of quinine in paludal fevers.

Primary Tuberculosis of the Tonsil, Cheeks, and Lips.—Dr. Lord recently showed a case of this kind at a meeting of the Johns Hopkins Hospital Society. The case was of interest, from the fact that the disease as it appeared upon the face and the mucous membrane of the mouth resembled somewhat a syphiloderm. The history of the case is briefly as follows: Six years ago she had a fibroid tumor of the uterus and she consulted a physician, who placed her upon iodide of potash and mercury for the purpose of causing absorption of the growth. She has thus been for the past six years on the iodide and mercurials. After taking the iodides for three or four years an eruption appeared all over the body, resembling, as she states it, the small-pox. Two years ago an ulcer appeared on the right tonsil and an irregular soft small ulcer appeared on the inside of the left cheek. Half a year ago the ulcer spread to the upper lip, which became greatly swollen and extended down to the lower lip. We saw her a week ago for the first time, and our diagnosis lay between specific trouble and epithelioma. She was seen by three throat specialists, and they thought it a cancer of the tonsil, which it resembles closely. The skin lesion looked like specific trouble. A section of skin was taken out and examined by Dr. Barker, who found it to be tuberculosis. This variety of tuberculosis of the skin is exceedingly rare. In four thousand post-mortems made by Chiari, only five cases of tuberculosis of the skin were found. These occurred in the regions where the mucous membrane and the skin come together, on the lips and about the anus, and in one case on the skin back of the ear. Anyone might make a mistake in diagnosing such a case, and had we not made a microscopical examination and stained for the bacilli we could never have diagnosed it correctly. Upon the side of the right cheek there was a large patch resembling rupia, but upon removing the crust the lesion looks like tuberculosis. The patient has had many of the symptoms of syphilis—rheumatic pains, falling out of hair, etc.

The Treatment of Lupus of the Skin.—Dr. W. Kramer advocates excision of lupus of the skin. He used this radical method ten times in the last two years, and in not a single case was recurrence observed, either at the place of operation or in its neighborhood. The patients were suffering from lupus of the face or neck, ranging from the size of a twenty-five cent piece to that of the palm, the outlying portions being raised as well. In all the cases the diseased portion was circumcised, the

knife passing one centimetre from its limits and deeply to or into the muscles, bone, or cartilage, the lupus, together with the subcutaneous tissue, being completely extirpated, after careful arrest of hemorrhage by compression or ligature. In four cases the wound was sutured; in three instances, where suturing, on account of excessive tension of the wound edges, but was partly practicable, secondary suturing was practised. Thiersch's method of skin-transplanting was employed, and in one case a plastic operation was performed. The course of healing was aseptic, and required from one to four weeks. The cosmetic result was very satisfactory. Kramer recommends the employment of extirpation as early as possible; but he claims that even in cases of advanced disease, lupus excision may be followed by relatively good cosmetic results. The method of transplantation, implantation, and plastic method now employed, have contributed largely to the success obtained in this class of cases at the present time.—*Annals of Surgery*.

Interval of a Week Between the Birth of Twins.—The following case is related by a correspondent of *The British Medical Journal:* Mrs. M——, aged thirty-eight, had had six children, and one miscarriage since at about two months. On December 9th, about 1:30 P.M., a fine, full-grown boy was born, and the placenta had come away. On placing his hand over the uterus he found another fœtus was there. On examination by the the vagina he could not feel any presenting part. There was no pain, and, after waiting some time, he left, leaving word that he was to be sent for if the pain returned. He saw her the next day, and once or twice during the week. She had had no pain, and was comfortable, though rather worried at the delay. He was called again on December 15th, about 2 P.M. The head was presenting, os flaccid, but no pain. After waiting a while, he gave a drachm of ergot, which caused some contractions in about half an hour. They were still very weak, and she seemed unable to make any effort on her own part. The head was then in the vagina, but the contraction of the uterus seemed to cause no progress; so he delivered with forceps, and found the cord tight around the neck of the child. It was a fully developed child (male), but not quite so large as the first. The placenta came away very soon, and everything has gone on well since. Between the birth of the two there was no lochial discharge, but the second labor commenced with the usual show on the morning of the 15th. There was no milk in the breast till after the second child was born. His reason for non-interference at an earlier stage was that there was no indication for doing anything, and therefore it was not a case for "meddlesome widwifery."

Choledochotomy.—According to Terrier, opening of the ductus choledochus is practised in two different kinds of cases. The first class includes those in which incision of the bile duct is performed with the object of extracting a foreign body, often a calculus, therefrom (*The British Medical Journal*). This operation he calls "choledochotomy." In the second class he places cases in which the operation is performed for the purpose of making a cutaneous biliary fistula. This operation, the author says, is better called "choledochostomy." Of the former operation, 17 cases are collected and reviewed in detail; 15 of the patients were females and only 2 males. The age of all the patients is not given, but the majority of the operations were performed on persons between the ages of thirty and sixty. In most cases the patients had suffered from hepatic colic, generally for several years, in some only for a few months. Icterus was present in most cases; in others there were swellings in the region of the gall-bladder or liver. In 2 cases biliary fistulæ existed. From the study of these 17 collected cases the author arrives at the following conclusions, namely: 1. Choledochotomy is a rational operation, and has given good results in 82.36 per cent. of the cases operated upon. 2. Indications for the operation are distinct, since the presence of calculi in the bile duct can be diagnosed in most cases. 3. Often examination of the gall-bladder and the bile duct is difficult on account of frequent atrophy of the former, the presence of numerous adhesions between the inferior surface of the liver and neighboring organs, and the depth at which the duct often lies. 4. In certain cases where it is impossible to get at the calculus it is not difficult to understand why surgeons prefer cholecystenterostomy to choledochotomy. 5. In all cases choledochotomy ought to be the operation of choice in calculus of the bile duct.

Effect of Chloroform on Labor.—The exact effect of chloroform inhalation on the contractions of the uterus during parturition has been recently experimentally investigated by Dr. Dönkoff, in the Kiel Obstetric Clinic, by means of an india-rubber bag passed into the uterus, communicating with a recording manometer, a kymograph, and a mercurial manometer, by means of a tube which, together with the india rubber bag, was partially filled with water (*The Lancet*). He finds that a slight degree of chloroform narcosis has a paralyzing effect on the uterine contractions, the pressure falling to nearly half what it was previously. If the chloroform is stopped the pressure during a pain increases, but at first to only about two-thirds of the original pressure. In two of the cases observed, the initial pressure was not regained until two hours after the cessation of the administration of chloroform. In cases where the abdominal muscles assisted the uterine contractions to only a moderate extent, this auxiliary was entirely arrested by chloroform even when the patient was only partially under its influence: but when the muscles exerted a great deal of force, their action did not entirely cease unless the patient was fully narcotized. The intervals between the pains were prolonged by chloroform, so that when the patient was partially anæsthetized the number of pains in a given time was diminished by 20 or 25 per cent.

Pulmonary Emboli Following Mercurial Injections.—Interstitial injections of mercury, so largely used at present in the treatment of syphilis, are sometimes dangerous. Dr. Blaschko has reported two cases in which the injections of mercury were followed by pulmonary symptoms (*Therapeutic Gazette*). In the first case, the patient complained of thoracic pain, coughed, and had accesses of oppression. On the day after the injection, the respiration became difficult, and the patient coughed bloody sputa. The second patient also complained of pain in the side, coughed, expectorated bloody sputa, and had a little fever. The symptoms in both cases disappeared in about three days. In a third instance, the patient had violent attacks of cough after the injection. These symptoms are explained by the author as being due to emboli caused by the paraffin employed as a vehicle for the mercurial preparations, which are insoluble, and are only suspended in the liquid. The writer believes that the mercurial injections give the best results in the treatment of syphilis, but that they must be administered by themselves, as in this manner they produce no untoward effects. The injections should not be so frequent in individuals affected with pulmonary troubles, especially phthisis.

Encephalocele Mistaken for Sebaceous Cyst.—Dr. Powell reports the following case: A Bengali male, aged twenty-two, came to Konapara Hospital with a tumor about the size of a tennis ball, situated above the left ear and temple. He stated it had been there only three years; and although freely handled, it caused no brain symptoms. I diagnosed a sebaceous cyst. On November 7, 1892, I proceeded to remove it, and was at once struck with the firm, dura-like appearance of the capsule, on incising which a quantity of watery fluid escaped. On pulling the cyst with forceps, the right arm and leg of the patient were thrown into violent spasms. I now discovered a hole in the skull, large enough to admit the index-finger. I freely incised the "capsule," and disclosed a portion of brain-substance as large as a hazel-nut. I raised the membrane carefully from the skull, and then

with a sweep of the knife shaved off the whole mass close to the bone. All through the operation the patient's right side was thrown into spasms when the tumor was pulled, but after its removal there was no paralysis whatever. This wound was sutured, and healed by first intention. He was discharged on November 13th, in perfect health, with no paralysis or defect of speech. He now admits that the tumor was congenital.—*British Medical Journal.*

Treatment of Bed-sore and Chilblain.—Writing on the erythemata, Dr. T. McCall Anderson points out that in cases of erythema nodosum and multiformé we must carefully inquire into and correct irregularities of diet and derangements of digestion; and if necessary anti-rheumatic remedies must be used. Arsenic may be given in chronic relapsing cases. The recumbent posture is generally necessary in erythema nodosum, and the limbs may be raised on pillows. In cases of erythema paratrimma (commencing bed-sore) we must do everything possible to improve the general health, and carefully attend to the condition of which the inflammation is a complication. The use of an air-cushion or of a water-bed must not be forgotten. As local applications Dr. McCall Anderson recommends frequent washings with spirit of camphor, or the application of glycerine, of tannin, or a drachm of gutta-percha dissolved in an ounce of chloroform, or a mixture of collodion and castor oil. If the skin becomes abraded, the surface may be painted daily with nitrate of silver solution (ten grains to the fluid ounce), and then covered with zinc ichthyol gelatine. If sloughing occurs, Dupuytren's treatment should be resorted to—namely, pledgets of lint soaked in lime-juice, and sprinkled with a mixture of powdered cinchona and charcoal. Stimulating lotions may be employed after separation of the sloughs. In obstinate cases the continuous warm bath may be resorted to. In erythema pernio (chilblain), should ulceration have occurred, warmth, elevation, and rest are required, and friction should be avoided. The ulcers must be treated, according to their nature, on the principles applicable to ulcers in general; but if these are sluggish, a favorite remedy is equal parts of spirit of turpentine and resin ointment. In all cases the general health requires careful attention. Tonics are usually indicated, among which arsenic and quinine must be placed in the first rank; and digitalis may be tried if there are any signs of failure of the heart.—*Practitioner.*

Crystalline Chloroform Compounds.—A new discovery is announced which is likely to throw some light upon the vexed and important question of chloroform and its impurities (*The Lancet*). Professor Anschütz, of Bonn, in the course of certain researches in which the preparation of salicylic anhydride ($C_6H_4CO_2$) was involved, had occasion to use chloroform in the process, when he found that the mixed solution, after being left for some time, deposited in beautiful crystalline form a compound of chloroform with salicylic anhydride. A similar compound is formed also when ortho-cresotinic acid is substituted for the salicylide. The salicylide contains about thirty-three per cent. of chloroform, and the cresotinic compound about thirty per cent. Both bodies yield very pure chloroform when heated to 100° C.—a temperature considerably below their melting-points. The cresotinic compound is, however, the more stable body, decomposing but little in the air, while the salicylide, under the same conditions, slowly gives off chloroform in a state of remarkable purity. Inasmuch as none of the usual impurities of chloroform crystallize along with these compounds, the process would appear to afford a method for the purification of chloroform on more satisfactory lines, for repeated crystallization is a method which yields, as every chemist knows, the purest and most refined products. Moreover, a solid chloroform compound is, as will be imagined, less likely to undergo decomposition than a liquid compound, while the advantage of being able to transport chloroform practically in a solid form (for by simply warming the compound pure chloroform may be obtained) is one of obvious value. Meanwhile, the results of clinical experiment with this new product will be awaited with eager interest, this being the test that alone can decide its value for anæsthetic purposes, however "chemically pure" the substance may be.

Effects of Pneumonia on the Kidneys.—Dr. I. M. Danforth gives the following as his conclusions on the ultimate effects of pneumonia on the kidneys: 1. Pneumonia may, and generally does, produce some degree of hyperæmia of the kidneys, the amount of hyperæmia depending partly upon the area of lung involved and partly upon the temperature of the patient. 2. Albuminuria is frequently present in pneumonia, beginning in the early stage, and continuing until defervescence is established, when it generally disappears. 3. Hyaline tube-casts are not uncommon in pneumonia, but they are likely to be small, few in number, and destitute of morphological elements, and are therefore likely to escape notice. 4. The albuminuria of pneumonia may persist, and become the starting-point of chronic nephritis. 5. In many cases, chronic interstitial nephritis antedates the pneumonic attack. 6. Experience shows that renal congestion, as demonstrated by albuminuria and tube-casts, may occur in any and every case of pneumonia; therefore the usual methods of diagnosis of renal lesions should be employed in every case of pneumonic invasion. 7. There are no characteristic or constant ulterior effects produced by pneumonia upon the kidneys; but if any such effects follow, the most likely lesion is chronic parenchymatous or tubal nephritis.—*Chicago Medical Recorder.*

Abscess of the Pancreas.—Dr. Whitton has observed the case of a man who had fallen from his dray in a state of intoxication, and was admitted to hospital with four ribs broken. Next day there was some tympanites, and he was coughing a good deal; the third day he began to vomit a bilious fluid, and complained of a fixed pain just above the umbilicus. For a week the patient's condition fluctuated, the vomiting and pain being the chief symptoms, though neither of them was constant. At the end of this time he seemed worse. There was some diarrhœa, when at 3 P.M. he began to vomit yellowish fetid pus, and gradually sank, dying at eight o'clock the same day. At the autopsy some recent pleuritic adhesions were found on the right side in the neighborhood of the fractured ribs, and the liver was friable; but the chief result was the discovery of an abscess in the pancreas, penetrating the duodenum about eight inches from the pyloric end of the stomach.—*Australian Medical Gazette.*

Bacteria and Hemorrhages in the New-born.—Drs. Tavel and Quervain describe two cases of hemorrhages occurring in the new-born, in which bacteriological investigations of the blood were made. In the first, a purulent discharge from the umbilicus was noticed a few days after birth. Multiple hemorrhages occurred ten days afterward. The infant died on the thirteenth day. At the autopsy blood stained fluid was found in the pleural cavities; there was double pneumonia, and hemorrhages were also noted in the mucous membrane of the stomach and intestines, and into the substance of the kidney. Examination of the blood and organs by means of cultivations showed large numbers of streptococci, with a few staphylococci. In the second case, pneumonia developed on the tenth day, and death took place two days later. At the autopsy hemorrhages were found in the pericardium, beneath the dura mater, in the pia mater, and in the substance of the brain. On similar examination of the blood, staphylococci were found in large numbers.—*Centralblatt für Bakteriologie.*

Mosquito Bites.—A Russian physician recommends napthalin as a remedy for insect bites. The drug is employed in the form of a saturated solution in liquid vaseline, two or three drops being applied to the bite. It causes a smarting sensation, which is, however, only temporary.

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THE TEACHINGS OF FAILURE.

IT is a professional commonplace that we often learn more from our failures than from our successes. Wholesome mental discipline is never out of place, and in the long run we may be the gainers by a candid meditation concerning the causes which have led to our failures.

Dr. Skerritt, in his recent presidential address, delivered before the Bristol Medico-Chirurgical Society (*The Bristol Medico-Chirurgical Journal*) chose this fruitful theme for discussion.

In reference to the tuberculin fiasco the author pointedly says that "bitter disappointment has followed; the prince among scientists is fallen from his high estate; and a blow has been struck at confidence in scientific methods and scientific men which will leave its mark upon our profession for a generation. Where was the mistake? We as a profession—against our judgment, be it said—trusted too much to the *man*, although he appeared in the novel *rôle* of a clinical physician. Probably all recognized the anomaly in Koch's explanation of the phenomena involved, and found it hard to understand if tuberculin destroyed the surrounding tissue rather than the active focus itself, how the disease was to be eradicated. And the result proved that this doubt was well founded. Had the announcement come from almost any other source it would have been received far differently; but on such respected authority careful trial was imperative."

Imperfect and insufficient clinical observation is responsible for many false hopes with their consequent disappointments. Witness the modern therapeutic history of tuberculosis. Without exaggeration it is positively melancholy to look back upon the last few years, and see how remedy after remedy has been introduced with flourish of trumpets, has failed to stand a wider test, and has fallen into the background. Take a few of the army of alleged specifics: Iodóform, aniline, thymol, tannin, ozone, calomel and corrosive sublimate, homeriana, hydrofluoric acid; antiseptic inhalations of carbolic acid, creasote, iodine, eucalyptol, iodoform, turpentine, sulphurous acid, chlorine, sulphuretted hydrogen (which were to go to the root of the whole matter by attacking the bacillus in its stronghold); rectal injections of sulphuretted hydrogen; subcutaneous and intra-tracheal injections of drugs that are much better introduced by the channels that nature has provided; intra pulmonary injections of iodine, iodoform, creasote, carbolic acid, iodol, camphor-carbolate, biniodide of mercury, naphthol, boronaphthol, camphor, guaiacol, and the like (designed to act directly upon the tissues into which they were injected, regardless of the impossibility of absolutely determining the diseased areas by anything short of a post-mortem examination); the introduction of the bacterium termo in legions, to war upon its natural foe, the bacillus tuberculosis; Liebreich's injections of cantharidinate of potash in imitation of Koch; subcutaneous injections of goat's blood and of dog's serum; a long array, with Koch's tuberculin at one extreme and Brown-Séquard's fluid at the other. Even about our latest favorites, creasote and guaiacol, which still hold their ground, we are becoming uncertain.

It is impossible not to be struck with the uniformity of the good results claimed for each and all of the different modes of treatment on their introduction: diminution of cough and sputum, of fever and night-sweats, gain in weight and strength, and often lessening of physical signs.

From tuberculosis Dr. Skerritt turns to influenza. If the therapeutic history of the former cannot be regarded with much satisfaction, the contemplation of epidemic grip is still less calculated to flatter our self-conceit.

"What does a survey of the voluminous literature of the epoch reveal? A host of authorities, each of whom is fully convinced of the power of his own favorite remedy, and equally sure that his neighbor's line of treatment is most prejudicial. One writer describes his unvarying success with carbonate of ammonia and the like, and goes on to say: 'As for antipyrin and its congeners, most of the deaths in the epidemic are, I think, to be attributed to their use.' He is immediately followed by another, who treats four hundred cases with antipyrin combined with salicylate of soda, and says: 'I also am happy to say that I did not lose a single case, and found no depressing or other evil effects from the antipyrin, but, on the contrary, marked benefit and saving of strength.' And these two are promptly discounted by a third, who testifies as follows: 'I am happy to say that I did not lose a single patient from the epidemic or its sequelæ; and I used very little medicine, and that of the simplest description.'"

In this connection the author very properly observes that no specific for influenza has yet been discovered; the uncomplicated disease runs its own short, well-marked course, practically uninfluenced by treatment, as was found by those who let it alone; and the result is equally good, whether the patient is treated with antipyrin or with camphor water. The truth of this was indeed brought home to us when influenza assumed its graver form, when it carried off its victims with almost the uncompromising rapidity of a plague. Where were the specifics then? Where was the disease with a mortality of *nil*, so tractable that a man could write of it, "I secured convalescence?" The malady was true to itself—whether benign or malignant, it recognized no specific.

He reminds us that medicine is an inductive science, and our inductive method is too often faulty. We are in too great haste to generalize; we establish our general propositions upon too few particulars. We give a remedy in a certain number of instances of a disease, and a certain result follows, which we claim as due to the drug. A wider experience does not bear out our conclusions.

and we therefore know that our premises were wrong—that the particular propositions upon which we generalized were instances, not of cause and effect, but of accidental association. We should have waited for more experience, we should have made control observations, so as with greater certainty to eliminate the element of chance.

He maintains that we do not allow enough for the *vis medicatrix naturæ*. He has always held that regular medicine owes much to homœopathy, which with its infinitesimal doses has proved how recovery, especially from acute disease, will take place under what is practically no medicinal treatment whatever. To experimental therapeutics might well be applied the ancient saying: "The sinews of wisdom are slowness of belief and distrust."

The author is not far out of the way when he states that growing experience tends to undermine the simple faith with which the young practitioner emerges from his student days; and unfortunately for the mental peace, the wider experience becomes, the more do certainties give place to probabilities. In forming an opinion it is always wise to give due weight to possibilities as well as to probabilities, and to make full allowance for the unexpected.

The conclusion of this eminently suggestive address is to the following effect: "We fail from imperfect knowledge of disease, and from faulty observation of individual cases. If we would avoid error we must, one and all, study more carefully the natural history of every morbid condition, and watch more closely the features of every instance that comes before us. So shall we best be able to determine the nature of the phenomena with which we meet, and to foretell their course; so shall we best discover the real effect of remedial measures, and escape the fallacy of attributing to treatment what is in truth the outcome of the untouched disease. If failure opens our eyes to our deficiencies, if it makes us more critical, more careful to avoid unscientific methods of observation and research, if it leads us to greater diligence, thoroughness, and honesty in our work, then it will not have come to us in vain."

GLYCERINE IN THE INDUCTION OF PREMATURE LABOR.

The induction of premature labor is sometimes imperatively called for by the presence of eclampsia or other threatening conditions. The ordinary methods consist in introducing a bougie or a dilator, or in injecting warm water. Not long ago Dr. Pelzer (*Arch. f. Gynäkologie*, xliii., p. 220) described his experiences with intra-uterine injections of glycerine. This substance, he claimed, produced premature labor quickly and safely, and was altogether superior to other methods. Professor A. R. Simpson (*Edinburgh Medical Journal*) has recently related his experiences with this agent, and has been led to think very favorably of it. He says:

"When care is taken to fill the syringe to the very nozzle with glycerine, so that all air is expelled, the procedure seems to be unattended with any danger. One, two, or three ounces are slowly injected, and though some of the fluid may escape at once past the tube, a sufficient quantity passes in between the membranes and the uterine wall, and lodges there, to produce the desired effect. This seems to come about very speedily, as the uterus soon begins to contract if it has been previously quiescent, or to contract more vigorously if the pains were feeble. In cases where the uterine action is not so energetic as is desirable, the injection may be repeated; and I see no reason why it should not be repeated again and again, although, as far as experience goes, the second injection proves sufficient."

To the inquiry as to how the glycerine injection sets up uterine action, Pelzer offers three suggestions:

1. It produces a mechanical separation of the membranes from the interior of the uterus. This is an action which it has, of course, in common with other methods employed for the purpose, such as the separation of the membranes with a finger, sound, or bougie, or by the injection of warm water, pure or medicated, through the cervical canal.

2. He suggests that it may have the effect of a direct irritant on the interior of the uterus, setting up in this way uterine contractions. This is the more to be believed when we remember the effect of injections of glycerine into the rectum, which favor the evacuation of that canal, not merely by the promotion of secretion, but by irritation set up in the muscular wall, the contractions in which sometimes continue in a tenesmic fashion after defecation has been completed.

3. The most important influence of the glycerine, however, lies in its well marked hygrometric property. Its power of absorbing water is so pronounced that it attracts to itself the liquor amnii through the medium of the membranes, and there results from this withdrawal of the liquor a certain degree of collapse of the uterus, such as is seen in cases where the membranes are ruptured and the fore-waters escape.

PREVENTIVE INOCULATIONS OF YELLOW FEVER.

We have received from Dr. Domingos Freire, of Rio Janeiro, a pamphlet containing his fifth series of statistics concerning vaccinations with the attenuated virus of yellow fever, practised in Brazil during the epidemic of 1889–90. The figures include all the inoculations made in the three towns of Rio Janeiro, Campinas, and Miracema.

In Rio, during the year ending June 30, 1890, there were 721 deaths from the disease, 630 among the foreign population, and 73 among natives, the nationality of the remaining 18 being unknown. The percentage of deaths, therefore, to the entire population, estimated at 360,000, was 0.2. During this period there were 97 vaccinations practised, and among the persons thus protected there was 1 death, or nearly one per cent. In Campinas, with a population of 20,000 reduced by flight during the epidemic to some 8,000, or say an average during the entire period of 15,000, the total number of deaths was 350, or about 2⅓ per cent. The number of persons vaccinated was 215, among whom 27 were attacked with yellow fever and 4 died, giving a mortality among those vaccinated of somewhat over 1⅞ per cent. In Miracema there were 12 deaths from yellow fever in a population of 561, giving a percentage of a little over 2 1/10. The number of vaccinations was 51, with 1 death, or a little less than two per cent. Taking the three places together, we find a total mortality among

the non-vaccinated of 1,086, or 0.3 per cent. of the entire population. Among the 563 vaccinated there were six deaths, a percentage of about $2\frac{1}{10}$.

It is, however, not fair to compare these figures, for we have no means of knowing the foreign population, which comprises most of those susceptible to the disease in Rio Janeiro; hence the mortality among the vaccinated, who were mostly foreigners or susceptible persons from other Brazilian provinces, appears much too high proportionally. But leaving the statistics for Rio out of consideration, we do not see that there was much protection afforded by the so called preventive inoculations. In Campinas the percentage of deaths among the general population was $2\frac{1}{3}$, and that among the vaccinated was $1\frac{4}{5}$; and in Miracema, where the figures were too small to possess any value, the percentages were respectively a trifle over and a trifle under two per cent. The difference is much too small to offer any argument in favor of vaccination as a preventive measure. It certainly would not appear to warrant the confident prophecy of Dr. Freire, that "epidemics of yellow fever will soon disappear from Brazil;" a prophecy which, in view of the fearful ravages of the disease during the past year at Santos, is at least somewhat premature.

A GROWING EVIL.

A CORRESPONDENT writing, in the *Cincinnati Lancet-Clinic*, on the barter and sale of medical practices, says that this evil is assuming large proportions in our country. He mentions as first among the causes leading to this state of affairs, the crowded condition of medical ranks, which necessarily entails a dwindling of individual patronage. Next comes advancing age with its concomitant infirmities. In the latter case that feeling which whispers to one so decidedly of departed vigor, and the realization that one is doomed to the realm of the "lean and slippered pantaloon." Then there are the practitioners who have become antiquated. They may have been learned in medicine, but have, through increasing duties and the weight of advancing years, relinquished largely their studies, and have become what in colloquial parlance is styled "a back number." In the writer's words: "As the years pass they find themselves slowly, but surely, losing ground. For a long time they may get on in comparatively placid waters by drawing extensively upon their more industrious brethren through the medium of consultations. Here their abject barrenness of mind appears in painful contrast with their cultured fellows, and even the air of "conscious superiority" with which they surround themselves makes but a flimsy shield. Theirs is the period of life when avarice holds supreme sway. These things blended in one individual, who sees his business fading away, weakened vitality becoming weaker, the appetite for work and hardship, never robust, now almost extinct, prompt him to "sell his large, lucrative practice" to a younger, more energetic man for a few thousands with which to oil the wheels a year or two longer. And having succeeded in deluding him, how easy it becomes to quietly remain where you are! Of course, people talk, but what of that? A certain number of your old patrons, while they may despise your duplicity, admire your ability, and hence you have almost as many patients as before. This process is repeated year after year in divers ways, now selling, now taking a partner for a limited period at a ruinous bonus, only to shortly conclude that you will retire, and another victim is readily found to further your purposes.

"What is the practical lesson to be drawn from the foregoing? Young man, beware how you enter into engagements of this kind! If you decide upon such a course, don't permit yourself to decide on the inducements promised alone. Probe the case to the bottom. Learn all about the man you are about to deal with. Leave no stone unturned in your investigation of his character. Do not be deceived by fine words, but hunt up the proof! You will be introduced to many persons. They are his friends, probably self-interested in his material prosperity. Go out and investigate quietly for yourself. Verify every statement and promise made by the testimony of substantial and disinterested persons. Take plenty of time, and if after all you decide upon the venture, may the good Lord have mercy on you!"

These are vigorous words, and are evidently inspired by a sincere desire to warn the young and inexperienced practitioner against contracting entangling alliances. But we are loath to believe that the picture is not somewhat overdrawn. It may represent the actual condition of things in the West, but in the Eastern States many young men have found it to their advantage to form associations with older physicians of ripe experience and large practices. That there are medical men who do not scruple to profit at the expense of their juniors in such associations is not disputed. But avarice generally manages to overreach itself, and in the long run the man who habitually exploits his "partners" is doomed to go under. There is no difference in this respect between professional and mercantile pursuits. Honesty is still the best policy in the conduct of affairs, whether they be mercantile or medical.

This much may be said, however: in the business aspect of practice, business methods should be applied. The association of physicians is a business, and in every instance where such association is contemplated a specific contract drawn up in legal form should constitute the basis of joint operations. Oral promises are too easily forgotten to have any binding force, should disputes ever arise between the contracting parties.

THE STAMPING OUT OF BERI-BERI IN THE JAPANESE NAVY.

"THE wards for kak-ké cases of the University Hospital were closed last month, as there was not any patient. This item from the *Lei-d-Kwai Medical Journal* of December 24, 1892, is one of greater general and local interest than would appear at first sight and to those unfamiliar with the fight against this disease which has been waging for some years in Japan. It chronicles one of the great victories of science, and lends good grounds to the hope that beri-beri may before long become a rare or even unknown disease in the Mikado's dominions.

The affection was, up to ten years ago, the scourge of the Japanese navy, the number of sufferers from it in 1883 being 1,929 out of a total force of 4,769. The service was actually crippled by the disease, and when hostilities with Corea were threatening in 1882, the number of men suffering from kak-ké on the four most powerful ships of

the navy was so great that the vessels would have been practically useless had war broken out. Now the disease no longer exists in the navy, the number of cases in the four years 1886–89 being only six out of a total average force of 9,000.

This wonderful change has been brought about by, or at least has followed immediately upon, an improvement in the diet list. In 1880 Director General Kanehiro Takaki, then in charge of the Tokio Naval Hospital, undertook an investigation into the causes of kak-kè. He was struck at once with the great difference between the number of cases on shipboard and in barracks, and also noted that the disease was much more prevalent during long voyages. This led him to the suspicion that the cause of this variation in the number of cases of the disease might be referred to the difference in food. A study of the diet lists and examination of the food supplied to the men in barracks and on board ships, soon convinced Dr. Takaki that the amount of albuminates contained in the food was insufficient, and that there was an undue proportion of carbo hydrates. After considerable delay and the overcoming of many difficulties, a change was made in the diet list of the navy in 1884. The diminution that followed in the number of cases of beri-beri was nothing short of marvellous, and if no other changes were made at the same time to complicate the result, it would seem to be a most conclusive proof that kak-kè is a dietary disease. During a period of six years prior to 1884 there were 9,516 cases, while for the second period of six years, from 1884 to 1889 inclusive, there were but 765 cases, of which 718 occurred in 1884, the year in which the change in the diet list was instituted. The following year there were 41 cases, the year succeeding this, 3, and in 1887 not a single case was reported in the entire navy, with a force of over nine thousand men.

A STUDY OF NEW YORK CITY'S DISPENSARIES.

We have often felt that it would be a most desirable thing for the subject of medical charity and dispensary abuses to be taken up by some impartial student of economics, and discussed from the standpoint of a layman who is a student of social problems. There is in the public mind a feeling, perhaps not altogether unjustified, that the physician's views of this matter are tinctured a little with prejudice. The need of such an economic study seems to have been met by one of the daily papers of this city. In a series of articles on "The City's Dispensaries," which are appearing in the *Evening Post*, the dispensary problem has been investigated very carefully, and the conclusions drawn seem in the main to be very just.

We publish elsewhere a table showing the work done by the fifty or more dispensaries of the city. It will be seen that the total number of individuals treated in the city *gratis* is 452,422, or nearly half a million. The total number of cases per annum is 628,486.

Some particulars regarding this work are worth quoting here:

The municipal dispensaries, we are told, make no charge for medicines. More than this, they supply double quantities. The common dispensary charge is ten cents for a two-ounce preparation, and when a double allowance is asked for the price is twenty cents. Now, at the municipal dispensaries the ordinary allowance is four ounces for teaspoonful doses, and double or treble this antity when the doses are proportionally large. No bt this departure from the general rule would have a ralizing effect upon the whole system, if it were not that there are only two of these institutions, that both are on the very outskirts of population, and that to reach them all but those in the neighborhood are obliged to expend a dime or more for car fare, which is a practical offset to the free medicine. Among dispensary officials there is but one opinion as to the desirability of making a small charge for medicines or dressing. Not only does the income from this source go far to maintain the institutions, but its chief good is that it enables visitors to receive the dispensary's favor with a degree of self-respect.

Regarding the character of the patients at different dispensaries we learn this:

In the German dispensaries one naturally expects to see Germans only; at Bellevue the Irish hold the field; at the New York Dispensary, in Centre Street, Italy is regnant; at the East Side Dispensary, Hungarians and Bohemians prevail; while at Mt. Sinai and the Good Samaritan Dispensary the attendance is almost exclusively Jewish. The latter institution, corner of Essex and Broome Streets, undoubtedly ministers to the humblest patients; while the Vanderbilt Clinic, corner of Tenth Avenue and Sixtieth Street, comes into touch with the masses at the opposite extreme of the dispensary scale, and naturally is among those most exposed to imposition. Indeed, it is a remark one hears frequently, especially from officials of dispensaries connected with "rival" medical schools or colleges, that at the Vanderbilt Clinic "people come in carriages."

Naturally, the point of especial interest to the practising physician in connection with this study is the percentage of fraudulent cases. The writer of the *Post* articles states that during one year, by way of experiment, all doubtful cases were referred to the Charity Organization Society. The total number so referred was 1,500 (out of 35,000). Of this number about one-fourth were found to have given wrong addresses, another fourth were reported as able to pay, while the remaining half were classed as worthy of charity. The total number of suspicious cases is set down, therefore, as 563, or one-third of the 1,500, and one and one-half per cent. of the 35,000. It is manifestly unfair to conclude, as the writer does, that this 563, or 1½ per cent., represents the total of the fraudulent cases. For it assumes that the 1,500 selected to be investigated, represented all the possible impostors among 35,000.

It is assuming altogether too much to suppose that the examining physicians noted all those who were deserving of investigation.

Other statistics of the same kind are given. Thus the German Dispensary reports that, during the past year, 212 cases out of a total of 28,938 were referred to the Charity Organization Society, the investigation resulting as follows: Able to pay, 55; wrong addresses, 58; insufficient information, 18; not able to pay, 81. At the Mt. Sinai Dispensary a year's scrutiny resulted in only 36 cases being set apart for investigation, and of these 7 were adjudged able to pay a physician his customary fee, 12 had given false addresses, and 17 were found not able to pay. This out of a total of 31,185 cases.

The proportion of persons able to pay a physician something varies greatly in different dispensaries. In our opinion, based on considerable personal experience, it reaches in some places as high as five per cent. Even in the large dispensaries, situated in the poorer districts, there are great numbers of persons who can pay twenty-five to fifty cents; this is shown by the fact that in these neighborhoods there are physicians who have an enormous office practice and who dispense medical services for these fees.

THE PLEASURES OF THE DOCTOR'S LIFE.

Mr. Philip Gilbert Hamerton, in his "Intellectual Life," was once kind enough to say that the physician's career was eminently an intellectual one in the sense that it called into play all the faculties of the mind in their widest range, stimulating the mind and broadening the character. We quite believe that this is true, but we are also bound to confess that we have met esteemed brethren whose appearance very completely masks their intellectuality.

Dr. William Broadbent has recently taken up this subject and dealt forcibly and eloquently on "the intellectual interest of the study and practice of medicine." Dr. Broadbent asks, "What are the conditions of happiness in a man's life, and how far are these supplied in a medical career?" There is a pleasure, he thinks, in relieving suffering, in bestowing sympathy, and in receiving the gratitude of those whom one helps. Yet this hardly counts as one of the advantages of a medical life, for it is too intimately associated with serious duties and privileges. Dr. Broadbent rightly suggests that it is the intellectual interest in his work which furnishes the most stimulus and enjoyment. "The business of the physician's life is the solution of intellectual problems of the most interesting character." This and the varied and continuous work keep the mind alert and full of the pleasure which comes from a healthful activity.

Dr. Alfred Freer, in the *Birmingham Medical Review*, in an article on "Some Reliefs in General Practice," suggests some other things which make the doctor's life more tolerable. He quotes approvingly Mr. Tupper's line concerning "the joy and restfulness of a well-ordered home;" but this is an element that adds to the happiness of all kinds of workers. Dr. Freer thinks that adequate pay for medical services contributes immensely toward making the doctor's lot a happy one, and there can be no disputing this fact. One cannot interest himself heartily in intellectual problems, if debts weigh upon him and his family is in need. But this, too, is a fact that applies to all callings, though perhaps to none so decidedly as to that of the physician.

There is a pleasure in cultivating certain hobbies, and the doctor often gets much relief and diversion thereby. The game of politics interests some; others take a fancy to sanitation and microbes and sewers; rather more affect the fine arts or literature, or are gatherers of bric-a-brac.

After all, however, Dr. Freer makes his best suggestion when he tells us that many do, and more might, get enjoyment and mental relief by looking at "the humor of the thing." The doctor sees the grotesque and amusing side of human nature more than any one; and we have an infinite number of jests which are the result of this fact. We fancy that this lighter way of looking at humanity's ills is becoming continually more popular. We do not mean that there is less sympathy for suffering, but it is not surrounded with so much seriousness and wears less of the tragic air. Dr. Freer has endeavored to illustrate "the humor of the thing" by some anecdotes. The esteemed author is not fortunate in his selections, or else they have a different standard of wit in Birmingham. Dr. Freer's humorous experiences, as cited, do not prove that there is not fun in physic, and we trust that all good doctors will cultivate a fondness for seeing the sunny side of their calling. There is more of it than there used to be.

"When I was a young man," said Jonathan Gray,
"If a fellow took physic he knew it, you bet.
It would cramp him all up in a colicky way,
And, good Lord, what a twisting his insides would get!
But the pills in use nowadays by sensible folks
Are as easy to take and as pleasant as jokes."

A PRACTICAL STYPTIC.

About a year ago we called attention to an article by Dr. A. E. Wright on physiological styptics. Dr. Wright showed that it was possible to lessen the tendency to hemorrhage or stop its occurrence by using those substances which normally bring about coagulation. He described his method of obtaining fibrin-ferment and gave the results of some experiments made with it and calcium chloride.

In *The Lancet* for February 25, 1893, Dr. Wright returns to this subject and describes a way of preparing his styptic which he says gives a much stronger product than that gotten by other methods. The details are as follows:

"Take the thymus gland (chest sweetbread) of a calf, reduce it to a fine pulp by passing it through a sausage-machine, and extract with three to four litres of a 1 to 2 per 1,000 solution of carbonate of soda which has received an addition of five grammes of chloroform per litre. Stir thoroughly at intervals, and continue the extraction for twenty-four to thirty-six hours. At the expiration of that period it will be found that almost the entire substance of the gland has dissolved in the dilute alkaline fluid. Strain through fine calico and add one per cent. of calcium chloride; preserve in stoppered bottles." In order to obviate the considerable precipitate of calcium carbonate which is obtained on this addition, it is well to acidify the thymus extract with dilute hydrochloric acid before adding the lime salt. The slight alkaline reaction is to be subsequently restored by an addition of weak caustic soda. This styptic will keep for an indefinite time if the chloroform is prevented from evaporating. With a styptic prepared as above Dr. Wright has been able to arrest the hemorrhage after cutting across both a femoral and a carotid artery in a dog. The action of the styptic was assisted by compressing the arteries for one or two minutes.

The author adds that his styptic may be applied on a tampon to any bleeding surface where strict asepsis can be dispensed with. If it is necessary to render the styptic perfectly aseptic, this can be done by boiling after making a sufficient addition of alkali to keep the albuminous substances in solution. Boiling involves a great, but not a complete, loss of coagulating power.

Chemically the styptic is said to be a solution of "tissue-" or "cell-fibrinogen," with the addition of lime. Dr. Wooldridge, of England, and Drs. Arthus and Pagès, of France, first discovered and described the substance.

News of the Week.

As the New Medical School of the Johns Hopkins foundation will demand elaborately constructed buildings, which, if we may judge from the time taken to build the hospital, will require much time for their construction, it has been uncertain how the trustees could meet the requirements of Miss Garrett, that the school should be opened in the autumn of the present year. The public is now informed that two additional stories will be built over the pathological laboratory, one of which stories will temporarily accommodate the medical school.—*Maryland Medical Journal.*

American Pediatric Society.—The American Pediatric Society will hold its fifth annual meeting at West Point, N. Y., May 24, 25, and 26, 1893. The sessions will be held at Cranston's Hotel.

Hotel Doctors in Chicago.—We are very glad to learn, from the *Chicago Medical Bulletin*, that the hotel doctors of that town do not charge extra rates or divide with the proprietors. The fee of the Chicago hotel doctor is $3 for day calls and $5 for night. We can only say of this that the price is too low, or else the service is very poor.

The German Poliklinik had its tenth anniversary dinner at Arion Hall, on Wednesday evening. The following were the regular toasts and their respondents: "The Poliklinik," by Dr. S. Cohn; "The Ladies," by Dr. Stiebeling; "Our Building," by Dr. Lilienthal; "Etiquette," by Dr. Ramdohr; "The Press," by Dr. Weiss; "The Bachelors," by Dr. L. Fischer.

The guests of the evening, Drs. George F. Shrady and A. Jacobi, responded on call, after which Mr. Hauser from "Hallo," gave a humorous address on the doings of the Doctor, followed by Dr. Beck, who delivered an oration, and Dr. Rottenburg, as toastmaster, concluded with a congratulatory speech. Dancing then followed, in which the ladies took the usual active part.

Typhus Fever in the City of Mexico.—A letter to the New York *Medical Times* says: "The sanitarians and physicians here are still combatting the typhus fever, which is taking off about three hundred people a month. There is great alarm felt lest the disease may have come to stay, and probably energetic measures will be taken to purify the streets, which are merely elongated cesspools."

Mr. Von Seggern, of Ohio.—Mr. Von Seggern, a senator from Hamilton County, was chairman of the committee to which the Medical Practice Act was referred. This gentleman allowed the Legislature to adjourn without even deigning to make a report, favorable or unfavorable, to the Senate. We consider this an act of discourtesy to the medical profession of Ohio, and one that should be resented by every physician. Mr. Von Seggern should not be allowed to be re-elected, and the physicians should use every possible endeavor to prevent his return.—*Cincinnati Lancet-Clinic.*

Census of New York City's Dispensaries.

	Number of cases reported by dispensaries.	Per cent. of deductions on various accounts.	Approximate number of individuals.
Supported by the United States.			
Marine Hospital	3,310	15	2,810
Supported by the Municipality.			
Bellevue Dispensary	44,554	35	28,965
Gouverneur Dispensary	25,252	35	16,418
Total	69,806		45,383
Corporate Institutions—Independent and General.			
Good Samaritan	95,233	35	61,913
New York	46,482	30	32,538
Vanderbilt Clinic	35,657	25	26,737
DeMilt	30,111	30	21,081
Northwestern	29,963	30	20,975
Northeastern	21,694	30	15,190
Northern	15,549	35	10,899
German Poliklinic	13,491	20	10,793
East Side	10,500	20	8,400
Beth Israel	7,500	30	5,250
Harlem	6,509	20	5,209
West Side German	3,250	15	2,770
Six of a smaller class	5,148	10	4,638
Total	321,087		226,393
Connected with Hospitals—General.			
Mount Sinai	31,185	20	24,945
Roosevelt	24,966	20	19,972
New York (with Chambers Street)	19,382	20	15,504
Presbyterian	9,349	15	7,954
Manhattan (Harlem)	2,709	10	2,439
Church	2,000	10	1,800
French	1,808	10	1,628
St. Vincent	674	5	641
Total	92,073		74,883
Connected with Hospitals—Eye, Ear, and Throat.			
New York Eye and Ear Infirmary	21,706	10	19,536
Manhattan	14,123	10	12,711
Ophthalmic	13,722	10	12,350
Ophthalmic and Aural	9,003	10	8,103
New Amsterdam	2,025	5	1,924
Harlem	1,540	5	1,405
Metropolitan	1,202	5	1,140
Total	63,321		57,229
Connected with Hospitals—For Women and Children.			
New York Infirmary for Women and Children	8,425	15	7,165
St. Mary's	2,897	5	2,752
New York Medical College and Hospital for Women	1,855	5	1,762
Woman's	1,427	5	1,356
St. Andrew's	831	5	790
Babies'	240	..	240
Total	15,675		14,065
Connected with Hospitals—Orthopedic.			
Ruptured and Crippled	8,855	5	8,410
Orthopedic	2,197	..	2,197
Total	11,052		10,607
Connected with Hospitals—Skin and Cancer.			
New York Skin and Cancer	1,785	10	1,607
Connected with Hospitals—Miscellaneous.			
Two institutions	1,252	5	1,190
Connected with Colleges.			
Post-Graduate	15,862	20	12,662
New York Policlinic	12,000	25	9,000
University	10,000	25	7,500
Eclectic	4,502	15	3,827
New York Homœopathic	2,500	10	2,250
Total	44,834		35,239
Connected with Churches.			
Trinity	3,291	10	2,962
St. Barnabas Mission	1,000	10	900
Total	4,291		3,862
Grand totals	628,480		472,429
Deduction on account of "rounding"			20,000
Grand totals	628,480		452,429

The American Association of Obstetricians and Gynecologists will hold its sixth annual meeting at Detroit, Mich., on June 1, 2, and 3, 1893.

The Effort to Consolidate the Regular and Homœopathic Departments of medicine in the University of Michigan have failed for the present.

Professor Kundrat, of the University of Vienna, died on April 25th.

Columbia College.—It is reported that the trustees have decided to make the course in the medical school (the College of Physicians and Surgeons) one of four years instead of three.

The Medical Department of Buffalo University held its Commencement May 2d, and graduated forty-nine students.

A Society of Magnetizers has been organized in Paris. Their rules forbid the members to treat disease with drugs.

The New York State Medical Association.—The ninth annual meeting of the Fifth District Branch will be held in Wurzler's Building, 315 Washington Street (near City Hall Square), Brooklyn, on Tuesday, May 23, 1893.

Association of American Physicians.—The eighth annual meeting of this association will be held in the Army Medical Museum and Library Building, corner Seventh and B Streets, Washington, D. C., May 30 and 31, and June 1, 1893.

American Climatological Association.—The tenth annual meeting of this association will be held in the College of Physicians, Thirteenth and Locust Streets, Philadelphia, May 25, 26, and 27, 1893.

The Late Dr. Frank H. Ingram.—At a meeting of the Board of Pathologists of the New York City Asylum for the Insane, held April 4, 1893, the following resolution was adopted:

"*Whereas*, Death has deprived this Board of one of its most valued members, and each, personally, of an esteemed and worthy professional brother, Dr. Frank H. Ingram; therefore, be it

"*Resolved*, That the members of this Board express their regret at the untimely termination of his promising career, and that they extend to his family the expression of their deep sympathy with them in this great affliction.

"FRED. K. PETERSON, M.D.,
"J. P. MCGOWAN, M.D.,
"*Committee.*"

Dr. Benjamin Shurtleff Shaw, one of Boston's oldest and most esteemed physicians, died on May 2d.

Conference of State Medical Examining and Licensing Boards.—The third annual meeting of the Conference of State Medical Examining and Licensing Boards will be held in Milwaukee, Wis., June 7, 1893. The following subjects will be discussed: 1. The Evolution of State Medical Examining and Licensing Boards. Their present and prospective influence in elevating the moral and intellectual tone of the profession. 2. Composition of Boards; *a*, the desirable number of members; *b*, the desirable appointing power; *c*, the advantages and disadvantages of separate boards representing the different schools of practice. 3. Provisions of the Various State Laws; *a*, should the possession of a diploma from a recognized medical school be a prerequisite to appearing before a board for examination? *b*, what reciprocal relations should exist between boards? *c*, should teachers in medical schools be eligible to membership on State examining boards? *d*, defects in existing laws, the best law in vogue, the ideal law. 4. Methods of Conducting Examinations; *a*, how should the examination be prepared? *b*, the scope of examinations; *c*, the minimum and maximum requirements.

JOHN H. RAUCH, M.D., *President.*
HUGH M. TAYLOR, M.D., *Secretary and Treasurer.*

Obituary.

CHARLES CARROLL LEE, M.D.,

NEW YORK.

DR. CHARLES CARROLL LEE, one of the best known and most prominent physicians of the city, died suddenly of pleurisy on May 11th. Dr. Lee was born in Philadelphia in 1839, and graduated from the Medical Department of the University of Pennsylvania in 1859. He entered the army as surgeon and served during the Civil War, reaching the grade of colonel.

He then began the private practice of medicine in this city, and was for a long time one of the surgeons to the Woman's Hospital. At the time of his death Dr. Lee was Professor of Gynecology in the Post-Graduate Medical School, Surgeon to St. Elizabeth's Hospital, and President of the County Medical Society. He was a member of the Academy, the Pathological Society, and the Physicians' Mutual Aid Association, and was very active in the society and educational work of the profession.

Dr. Lee was a man of great geniality and courtesy of manner, and was greatly beloved by a large circle of friends. He impressed all with a feeling of his genuineness and sincerity; yet he showed also that with this he possessed strong character and firmness of purpose. He acquired a high degree of skill as an operator, but was never led into extremes, and he did not become a victim of the ovariotomy furor which led away some of his confrères.

He was taken away while at the height of his activity and usefulness. When death strikes such men it leaves a gap not easy to fill, and the sudden loss of Dr. Lee will long be keenly felt by the many who had learned to appreciate his skill as a physician and his unusual qualities of mind and heart.

At a meeting of the Faculty of the New York Post-Graduate Medical School, held May 12, 1893, the following resolutions were unanimously adopted:

"The Directors and Faculty of the New York Post-Graduate Medical School and Hospital, wish to record their keen sense of the great loss they have sustained in the death of Charles Carroll Lee, M.D., LL.D., one of their Professors of Diseases of Women. Dr. Lee was a teacher of the highest rank, being able to intensely interest his hearers, and to convey to them a clear sense of his views upon the cases in his very important department. Dr. Lee was a Christian gentleman, who bound himself to his associates, and to those who were instructed by him, by the most affectionate ties. We deplore the great loss we have suffered. We shall ever count it an honor to us that for so many years he was one of the Faculty of the New York Post-Graduate Medical School and Hospital, and we respectfully present to his family our earnest sympathy in their supreme bereavement.

"D. B. ST. JOHN ROOSA, *President,*
"CLARENCE C. RICE, *Secretary.*"

Society Reports.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Ninety-fifth Annual Meeting, held April 25, 26, 27, and 28, 1893.

The President's Address.—"The Treatment of Neuralgia of the Trigeminal Nerve, with Special Reference to those Measures of Relief which are Obtained by Intracranial Excision of the Gasserian Ganglion." This was the title of a paper read by DR. L. MCLANE TIFFANY. It is not necessary to define neuralgia, but a trigeminal neuralgia has certain peculiarities. The anatomy of the Gasserian ganglion and its three branches is known to all, but the difficulty of getting at them in the living person is little appreciated. This neuralgia differs from ordinary neuralgia in being paroxysmal, and is probably the most painful that one has to do with. There are periods of absolute quiet between the paroxysms. The changes seen in the parts supplied by this nerve and its branches are very small in proportion to the pain the patient feels. There is generally no change at all or at times a slight glazed appearance of the skin, and rarely there has been atrophy of the muscle supplied by these nerves.

The age at which this form of neuralgia occurs is a most important etiological factor. It generally occurs in persons over forty, but one case of twenty-seven has been reported. Another etiological factor is that there are certain points of pain where the nerve makes its exit through the bone. When the surgeon has been called in, the treatment by drugs has been exhausted. Quinine and arsenic are drugs that do the most good, and it was formerly supposed for this reason that these neuralgias were malarial, but the more recent discovery of the plasmodium malariæ has shown that this is not always so. The next best drug is aconitia pushed to its full physiological effects; also antipyrin and antifebrin have been used with good effect. The surgical methods are section of the nerve, stretching and excision more or less far back. These are the three surgical methods used at the present day. Excision of the nerve was first done by Carnochan, in 1858, and his operation was considered classical. The patient on whom he operated was a physician of the State of Maryland, in Caroline County. His operation was successful. Obalinski operated on the same case several times, but relief was not permanent. There are numerous ways of getting at the nerve. We may take it from in front, or from behind. Rose, and Anderson of Chicago were the first to take it from behind. Horsley has also done it in this way.

Tiffany has operated twice in the head for intractable neuralgia. Both cases had been operated on before, and one several times. In one case excision of the upper jaw-nerve had been done. In his first case, which was a woman, he went through the side of the head, raised up the dura mater until he arrived at the middle division of the fifth nerve, put a string around it so as not to lose it, then scraped back the dura with a dental instrument which he had slightly dulled and brought the ganglion in sight. It was a novel sight to him to see the ganglion exposed to view in a living person. The lower division of the fifth nerve sends a motor branch to the muscles of mastication, and in operating it is very hard to leave this motor branch untouched. When the head is first opened the brain swells out and fills the entire space and it seems almost impossible to get at the nerve, but when shock came on in his case the brain shrunk and got smaller and made operating possible. He did not have to pour cerebro spinal fluid or blood into the head, as had been recommended, and he did not suture the bone, but the fascia. He wounded the dura mater, but no harm came of it. The patient got well, with normal temperature. There was at first entire anæsthesia of the parts supplied by the middle and upper branches of the nerve, but there was no paralysis at all and pain ceased from the time she went under the anæsthetic and she had no suffering at all. For two days the dressings were soaked with cerebro-spinal fluid from the wound, but on the third day he took off the dressings and took out the wires, and everything was healed. The patient was kept under observation for some time after the operation, and she had no relapses. The second case was a man and was much like the one just related, but there was much intracranial oozing. The second division of the fifth was involved in this case.

A Case of Acute Infectious Periostitis of the Fibula, with Exhibition of Patients.—This was a paper by Dr. F. C. Bressler.

DR. WILLIAM H. WELCH said Dr. Bressler had mentioned the occurrence of acute periostitis as a sequel or complication of an infectious disease and had mentioned the various organisms which may be found. A point of interest was whether the complication was due to the same organisms that caused the primary disease or to secondary invaders. He had examined a case of periostitis of a rib following typhoid fever and had found the typhoid bacillus in pure culture in the inflamed periosteal tissue. It was probable that the typhoid bacillus was capable of producing this complication. The ordinary pyogenic micrococci were, however, the usual cause of a complicating periostitis.

Plastic Surgery of the Face, Illustrated with Cases.—This was the title of a paper by Dr. W. B. Platt, and it was discussed by Dr. A. K. Bond.

Is Baltimore supplied with Good Drinking-water?—This was the title of a paper by Dr. Charles O'Donovan, and it was discussed by Dr. William B. Canfield.

Notes on Measles from Seventy-nine Cases in an Institution.—This was a paper by Dr. W. F. Lockwood and it was discussed by Dr. R. B. Norment.

Report of a Case of Diphtheria of the Heart.—This was by DR. W. T. HOWARD, JR. A man thirty-four years of age was admitted to the Johns Hopkins Hospital on November 7, 1892. He was a laborer. On admission he had weakness, diarrhœa, and pain. His family history was negative. He was well built and said he had never been ill before. He had a temperature of 101½° F., pulse 86, lungs were normal, apex beat in the fifth intercostal space on the left side, heart-sounds clear. After three days his temperature was 100° F. in the morning, and 103° F. in the evening. His spleen was not enlarged. The man grew worse and died on the 17th day of his stay in hospital. At the autopsy there was found a large thrombus in the mitral valve of the heart and extending into the cavity; the whole spleen was an infarction and there were numerous infarctions in the kidneys. Cover-slip preparations were made from this thrombus in the heart and an organism was found morphologically indistinguishable from the Klebs-Loeffler bacillus. Cultures were made with the same results. This bacillus has not so far killed animals, but it is a pus producer. Its first action seems to be death to the cells.

DR. WM. H. WELCH said Dr. Howard's observation was one of unique interest. It recalled the old name of diphtheritic endocarditis, which, however, was based on anatomical resemblances. The bacillus, found in abundance and in pure cultures in the cardiac vegetations, the splenic and the renal infarctions, differed in no respect morphologically or in cultures from the Klebs Loeffler bacillus of diphtheria. It had been carefully studied, not only by Dr. Howard and himself, but also by Dr. Abbott, of Philadelphia, and Dr. Councilman, of Boston. The failure to prove it pathogenic to guinea-pigs did not suffice to distinguish the bacillus from the genuine bacillus diphtheriæ, for it had been shown by Roux and Versin Abbott and others that the latter may be also devoid of such pathogenic power at the time of isolation and culture. Dr. Howard's case was the first to be recorded in which the bacillus diphtheriæ, or an organism closely resembling it, had been found as the cause of malignant endocarditis. This observation was furthermore of interest as an example of the penetra-

tion into the circulation and the internal organs of the bacillus of diphtheria.

The Hypodermic Injection of Solutions of Magnesium Sulphate as a Purgative.—This was the subject of a conjoint paper by Drs. G. H. Rohé and Percy Wade.

Calomel was the subject of a paper by Dr. Edward Anderson, of Rockville, Md.

A Case of Subcutaneous Emphysema Complicating Measles.—This was the subject of a paper by Dr. John S. Fulton, of Saulsbury, Md.

Dr. William H. Welch reported briefly the results of an autopsy which he had made upon a case of pertussis with general subcutaneous emphysema resulting from laceration of the lung-tissue and the entrance of air into the interstitial tissue of the lung, the root of the lung, the mediastinum and thence into the general connective tissue of the body. Dr. Northrup, of New York, had published an interesting paper upon interstitial emphysema from whooping-cough.

The Treatment of Metritis and Endometritis by the Electrical Current.—This was a paper by Dr. W. A. B. Sellman which was discussed by Dr. H. A. Kelly.

Modern Gynæcology, Illustrated with Stereopticon Views.—This was an illustrated talk by Dr. H. A. Kelly, in which he showed photographs of his operating-room at the Johns Hopkins Hospital, and explained his methods of preparing and conducting an operation.

The Present Status of Drug Therapeutics as Applied by the General Practitioner.—This was by Dr. A. K. Bond.

Puerperal Infection, with Special Reference to Auto-infection.—This was the special subject, and Dr. J. E. Michael spoke on the Etiology and Prophylaxis, Dr. J. Whitridge Williams, on the Bacteriology, and Dr. T. A. Ashby on the History and Treatment. This was discussed by the co-referees, Drs. Wilmer Brinton, W. S. Gardner, and L. E. Neale. There was very little new brought out except the results of Dr. Williams's bacteriological studies, which tended to show that puerperal infection was due to no one organism, but that several pyogenic organisms and others might be the cause. The general opinion seemed to be that while auto-infection was possible, hetero-infection was much more common.

Some Clinical Aspects of Immunity.—This was a paper by Dr. William B. Canfield, in which he stated that few persons were naturally immune, that second attacks were by no means so common as was generally supposed, and he thought that diseases that left no trace were more apt to be reported as recurring than diseases, such as small pox, which left a decided mark. He did not deny second attacks. He thought that drug eruptions, such as scarlatiniform erythema, were often reported as scarlet fever.

Dr. I. E. Atkinson said that the mistaking of drug eruptions for the eruptive diseases was by no means uncommon. He objected to the expression rotheln and preferred rubella.

An Ounce of Prevention; or, What the Poor Man Can Do to Escape Cholera—and the Doctor.—This was a remarkably clever and interesting paper by Dr. E. M. Schaefer.

General Paralysis in the Negro Race.—This was by Dr. H. J. Berkley.

Intra-peritoneal Hemorrhage.—This was the subject of the Annual Oration, which was delivered by Dr. Reginald H. Fitz, of Harvard University. The causes are various. It is not always a disease peculiar to women. Mild and fatal cases occur in man, but not often. Blood-vessels may break from weak walls, wounds from without or from crushes may all cause it in man. Hidden causes demand prompt attention, as an aneurism which is irremediable, tumors of the liver, pancreas, and other abdominal organs. Hemorrhagic pelvic peritonitis may be caused. The blood is poured out according to the force of the heart and may form a hæmo-peritoneum which may prove fatal, or the blood may be absorbed or it may break out, or it may form hematocele which will discharge the blood to some dangerous place if it break. It is very serious if it break into the bladder. The diagnosis of intra-peritoneal hemorrhage is not easy and an exploratory incision may have to be done. The patient suddenly collapses, which may make us suspect this condition even though we can find no physical signs. The treatment depends on the cause. It is more apt to be an aneurism in man and an ectopic gestation in woman. The sudden collapse with the recognition of a large smooth tumor in the abdomen, may cause a suspicion of this trouble and then immediate operation is necessary.

Biological Aspects of Blood and Blood-vessels.—This was a paper by Dr. J. C. Hemmeter. Blood is something more than a fluid, it is a tissue. The capillaries partake of the nature of glands and there is no sharp line to be drawn between digestion and absorption. The capillaries, as glands, affect the character of the blood as it passes through them.

Dr. William H. Welch: The suggestion as to the function of the capillary walls as modifying the action of the blood is a subject to which Heidenheim has given much attention and his name should have been mentioned, for he deserves the credit. It is evident that the vessels exercise some sort of elective action and are not mere filters.

Hereditary Influence; Its Relation to Mental Disease.—This was the subject of a very interesting paper by Dr. A. L. Hodgdon containing some facts on maternal and paternal impressions as well as cases of atavism and inherited peculiarities.

Dr. John Morris agreed with much the writer said and thought that such papers did much good.

Dr. I. E. Atkinson thought we should be careful how we accepted these facts. The tendency to inheriting acquired peculiarities is very small and he referred to the statistics on circumcision.

Dr. William H. Welch: Weissmann cut off the tails of eight hundred white mice in succession, and had not succeeded in making a single exception to mice born with tails His book, devoted to the consideration of the inheritance of acquired peculiarities has just been translated into English. All inherited peculiarities lie in the germ-plasm, and all the variations can be explained by changes in the sexual cells, and our sexual cells cannot be altered by acquired habits. He thinks the weight of evidence is opposed to the inheritance of acquired habits.

The paper was further discussed by Drs. Joseph T. Smith, John Morris, L. McL. Tiffany, J. C. Harris, L. E. Neale, R. T. Wilson, G. H. Rohé, and R. H. Goldsmith.

"Syphilis of the Nervous System" was a paper read by Dr. H. M. Thomas.

"A Case of Periodical Insanity, with the Menstrual Function the Exciting Cause of Outbreaks," was a paper by Dr. B. D. Evans. This was discussed by Drs. R. Gundry, J. C. Harris, P. C. Williams, H. B. Jacobs, G. H. Rohé and L. McL. Tiffany.

The Diagnosis of Asiatic Cholera.—This was the subject of a few remarks by Dr. William H. Welch. The diagnosis of Asiatic cholera is of great interest and the undertaking is one of much importance. The importance of the diagnosis varies at the time of the epidemic. It is important to make the diagnosis of the first case, or of the first few cases, as early as possible. The recognition of this is essential for preventing the epidemic. Then even after the epidemic has broken out, it is desirable to make the diagnosis early because the treatment should begin as early as possible, as it is then more effective. Nevertheless it is not a bad mistake if cases of diarrhœa are called Asiatic cholera, for other diseases are often called cholera.

The means at our disposal independent of the existence of an epidemic are the symptoms and the post-mortem appearances. The diagnosis after death is an important pathological aid of the disease. Experience during the last epidemic of cholera at Hamburg and elsewhere is

conclusive that there is no diagnostic symptom or pathological lesion of cholera: there is only one thing, and that is the determination of the organism, the comma bacillus of Koch, in the discharges. When we consider the different classes of cholera it is almost impossible to classify them. We have on record pathological studies of hundreds of cases, and we find that in 8 to 10 in every 100 the cholera bacillus has been found in the stools of healthy persons who have had to do with those sick, those with no symptoms of the disease and with no diarrhœa, but who are with the sick and in the hospitals. So far it has only been found in healthy persons who are near the sick. Then there are those cases of the Asiatic sort with diarrhœa and in no way differing from ordinary diarrhœa, but it is simply cholera without vomiting, in which the cholera bacilli are in the stools. These are not diagnostic without the bacilli. Then there are those cases of cholerine, that is, cases that present more or less the symptoms of cholera, but do not pass into asphyctic or algid condition of the disease, with diarrhœa, rice-water discharges, vomiting, cramps, complete suppression of urine, absence of the radial pulse and aphonia. This is cholerine. Of these cases there should be a very strong suspicion. The term is applicable only to a minority of the cases. According to the reports from Hamburg, we must not expect to have typical rice-water stools; they are more often absent than present. They have a color, and frequently contain some bile and are green or yellow. In the asphyctic stage the disease is more characteristic; there is complete suppression of urine and the urine secreted in the algid stage is called the last urine, and no more can be obtained with a catheter, and there is no more urine until this stage passes away.

The prognosis depends upon this stage. If it lasts seventy-two hours it is said to be hopeless. The character of the first urine passed after this stage is awaited with great interest. It always contains albumin and casts and the prognosis is always more favorable the larger the number of casts, for they must be washed out. The absence of the radial pulse is another symptom of importance. There is no correspondence between the strength of the heart-beat and the absence of the pulse, indicating that this absence of the radial pulse is in part caused by the spasmodic contraction of the blood-vessel. The heart is often quite strong. There is loss of voice or hoarseness; extreme coldness of the extremities, with the internal temperature normal or a little above. There is often six to eight degrees difference between the temperature in the axilla and that in the vagina or rectum. There is sinking in of the face, and the eyes take on that peculiar color which is described in the old books. Exactly these same symptoms may occur in cholera nostras, but an absolute diagnosis cannot be made from these alone. The disease may go into a typhoid state and end there. The fulminating variety is where the symptoms come on with great rapidity. The impressions from the cases at Hamburg are that death was due to intoxication and not so much to draining away of the body fluids.

There is nothing in these symptoms taken by themselves or together to constitute a diagnostic landmark, nor in the post-mortem appearances that are decisive. All the usual post-mortem appearances are found in those cases and the results are not pathognomonic. We cannot make a diagnosis of Asiatic cholera from the post-mortem appearances. Koch's comma bacillus is the only true diagnostic point, just as the tubercle bacillus in tuberculosis. It is a difficult work, more so than the recognition of the tubercle bacillus, and it is doubtful if the general practitioner, even if he should have the knowledge, would have the time to go through the methods necessary to make the diagnosis. We first make cover-slip preparations from the rice-water stools, taking up the large rice lumps, and if they contain a large number we may be sure, but if only a few are present it is not safe to make a diagnosis in this way. There are probably one or two in every city capable of making a diagnosis from the stools and who are able to study the organism suspected. More frequently cultures are made, and that requires twenty-four to forty-eight hours to make the diagnosis, but sometimes it can be made immediately, and it is positive. The cases where these methods have failed are very very few and those of failure are regarded as curiosities. He should be prepared to make examinations at the Johns Hopkins Pathological Laboratory for any physician, and if any one should have a suspicious case he may send a specimen of the stools in a wide mouth bottle tightly sealed with paraffin or sealing-wax, and this may be sent by mail with safety and will last a long time.

The first case at Hamburg occurred August 14, 1892, died on the 15th, and through some delay the examinations were not made in time and the disease was not officially declared to be present until the 22d, and by this unfortunate circumstance 80 cases had broken out by the time the disease was officially announced. This is by no means an illustration of what can be done.

These remarks were discussed by Drs. P. C. Williams, J. C. Hemmeter, E. M. Schaeffer and D. W. Cathell.

"Suppurative Inflammation of the Temporal Bone," by Dr. H. Harlan, was discussed by Drs. H. Friedenwald and J. R. Winslow.

"The Causation of Inflammation," a Review by Dr. H. Friedenwald, was discussed by Dr. A. Friedenwald.

"Tuberculosis of the Pharynx," by Dr. J. R. Winslow, was discussed by Dr. William B. Canfield.

"Acute Glaucoma Following Extraction of Cataract," by Dr. F. M. Chisolm.

"A Clinical Study of Thirty-five Cases of Epidemic Cerebro-spinal Meningitis, with Especial Reference to the Eye Symptoms," by Dr. R. L. Randolph. This was discussed by Dr. E. J. Bernstein and A. Friedenwald.

"Hypertrophic Rhinitis as an Etiological Factor in Asthenopia," by Dr. E. J. Bernstein.

"A Study of Two Cases of Paroxysmal Sneezing, with Treatment," by Dr. William T. Cathell.

Dr. George H. Rohé was elected president for 1893–94, and thirty-four new members were elected.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 24 1893.

THE LATE CHARLES CARROLL LEE, M.D., PRESIDENT, IN THE CHAIR.

Memorial of the Late Dr. Laurence Johnson.—DR. DANIEL LEWIS read the memorial, which briefly reviewed the life history of Dr. Johnson and the services he had rendered to medicine, and eulogized those characters which grew out of an enthusiastic, earnest, able, generous, and laborious life. Dr. Johnson had taken an active part in many medical societies, had held many positions of honor and responsibility, had been twice president of the County Society, had given special study to medical botany, on which subject he had written a book, had given not a little attention to art, had a large practice, and spurred by a generous, unselfish, and industrious disposition, had paved the way to a premature grave by incessant labor. His life taught the important lesson that physicians should give more time to relaxation. His death proved too severe a blow to Mrs. Johnson, and she survived him but fifteen days.

This memorial was accepted in lieu of resolutions which were to have been drawn up by a committee of five, appointed at the last meeting. A vote of thanks was tendered Dr. Lewis.

Intra-uterine Treatment by the Curette and by Drainage in Salpingitis and its Complications.—DR. WILLIAM M. POLK read the paper. The cases were grouped into four classes, A, B, C, D. The diagnosis had been carefully made under ether, and by both rectal and vaginal bimanual palpation. Group A comprised lesser degrees of salpingitis, the disease being confined mainly to the

tubes. Case 1 of this group represented a minor degree of tubal disease in which probably there had been no closure of the infundibula, but there had been thickening of the walls throughout. Appendages non-adherent; uterus less mobile than normal. Treatment by curettement and packing with gauze. Result, as determined four months later, good symptomatically and anatomically. A similar result was obtained in the next case, which was a more marked one symptomatically and anatomically, there being also sterility. The latter remained after treatment. Case 3 was somewhat similar.

In Group B, illustrating pus-tube, several cases were related. In the second one, operated upon like the others, by curettement and gauze packing, the uterus, to begin with, measured four inches and a half, was sensitive, soft, there was a mass of its own size at its left which, when pressed upon, diminished slightly in size, and at the same time there was a free discharge of pus from the cervical canal. About a month after treatment the canal measured an inch less, there was no pain on pressure, the mass on the left was half the dimensions it had had at the outset, and the patient was so comfortable that she declined further treatment and went out. In the next case there had been pelvic inflammation, and the uterus was imbedded in a mass of exudate which had evidently sprung from an existing double salpingitis. Temperature slightly elevated. Fluctuation was felt in the cul-de-sac. It was evident an abscess existed, and this was opened through the posterior vaginal fossa and two ounces of turbid serum escaped. Four days afterward the uterus was curetted and packed. Twenty days later the uterus was found about normal size, the masses on either side reduced about two-thirds, the patient, who had been bed-ridden from pain and weakness, then felt so well that she insisted on her discharge.

Group C represented long-continued cases in which the adhesions were well organized and dense; cases, therefore, in which, because of the organization of the inflammatory product, but little improvement was to be expected from any treatment which looked to resolution. Two cases were cited, the result being benefit, not cure.

Group D included irregular cases. The first case of this class was one in which curetting and packing did not give relief from symptoms which were attributed to distended tubes, consequently laparotomy was performed, and it was then found that there was, in addition to salpingitis with marked thickening of the tubes, a purulent infiltration of both ovaries.

In the second case of this group he made the diagnosis of purulent salpingitis on the right side, and adhesions and thickening of the appendages on the left. Laparotomy was performed and the appendages on the right side were removed, the swelling proving to be a hæmatoma. On the left side the end of the tube was open, but the tube and ovary were adherent to the posterior face of the broad ligament. These appendages were freed from their attachment and allowed to remain, but later the patient returned because of pain on this side, where a mass could be felt which had not existed before. Relief was given by curetting and packing, and the case showed that this procedure should have been resorted to at the time of the laparotomy, as doubtless the subsequent left salpingitis was due to a previous endometritis. This case illustrated the necessity for prompt application of curettement and packing. The first case enabled us to state that suppuration in an ovary or in the cavity of the peritoneum would in no way be benefited by the process of uterine depletion which resulted from curetting and drainage.

The effect of the operation (curetting and draining) upon the uterus, and adnexa which were intimately and directly connected with it through its vascular and lymphatic supply (the Fallopian tubes and the broad ligaments), was to cause depletion of the organ and diminution in size. Properly done, it would not excite inflammatory reaction. In the lesser degrees of inflammation of the tubes, and as far as had yet been observed, in cases of pyosalpinx with enlargement of the uterus, the anatomical result of the operation was a diminution in the bulk of the inflamed structures, which clearly pointed to more or less resolution. Symptomatically, the operation caused a decided improvement in the sensations of the patient. In cases of long-standing salpingitis, especially if the uterus were not much enlarged—cases in which in all probability organization of the inflammatory products had taken place—the operation produced neither anatomical nor symptomatic improvement. All things being equal, the operation would be most efficacious in recent cases. In view of the fact that in no case where it had been properly applied ill results had followed, it was also concluded that in every case of endometritis and metritis with tubal disease, in which the conditions favorable to resolution were present, the curetting and packing of the cavity of the uterus should be employed before the radical operation of removing the appendages was resorted to. He maintained this attitude, not only because of the possibility of such relief being obtained as would satisfy the demands of the patient, but because of the opportunity offered for such an amount of resolution as would place these appendages in a condition more favorable for operation than if no such treatment had been employed.

Dr. George M. Edebohls viewed the cases in the same light as the author, and treated them the same, except that at present he discarded packing the uterus with gauze. He had adopted the packing with gauze after curettement in about fifty cases, and then returned to his former practice of only curetting thoroughly and introducing no drain whatever; for when the mucous membrane surrounding the os was thoroughly removed, no obstruction to drainage remained afterward. But imperfect removal of this strip of mucous membrane would cause it to swell and choke the mouth of the uterus.

Dr. H. J. Boldt thought the majority of gynecologists were agreed upon the main features of the paper. "Provided the curettement was done properly no harm would result," was a very important proviso. He had known it to be done improperly and mischief follow, the operators being incompetent.

Dr. Ralph Waldo related a case of salpingitis in which he curetted and packed with gauze, telling the patient at the time that it was not impossible in the future it would be necessary to remove the uterine appendages. She recovered from her salpingitis and endometritis slowly, but sufficiently to conceive, for she had since treatment had an abortion. Formerly he had treated such cases by curetting and draining with a tube, but had since found packing with gauze superior to any other form of drainage.

Dr. Herman L. Collyer had, five years ago, treated his first case of distended tubes by thorough curettement of the uterus and packing with gauze, also correcting flexion and stenosis, and the result of the treatment had been reduction in size of the tubes and freedom from pain. He might also say that he used tincture of iodine in the uterus in addition to gauze. Since then he had employed the method in other cases, and lately in one with strong adhesions and distentions of the tubes, obtaining excellent results.

After some further remarks the discussion was closed. Dr. Polk seemed somewhat surprised that, according to Dr. Boldt, this was the common method of treatment.

The Non-operative Treatment of Uterine Disease.—Dr. P. J. McCourt read the paper (published in a previous issue).

Sterilized Catgut in a Convenient and Portable Form.—Dr. Otto G. T. Kiliana read a brief paper with this title. The success of surgery depended largely upon close attention to details, one of the chief objects being to secure perfect asepsis. In this direction nothing was more important than the suture material. Catgut would have been more highly appreciated had it not too often been used in a more or less uncleanly or septic condition. Three important points were connected with its use: 1, how to sterilize it; 2, how to keep it in this condition; 3, how to make it portable in the sterilized condition.

The author then described his method, which was essentially that which had been practised by Schede for four or five years. In preparing the catgut alcohol was used to cleanse it. It was wrapped on glass spools in strips of a yard to two yards. A suitable number of these were put into a glass tube, the alcohol was driven off by a lower grade of heat. After being thoroughly dried the end of the glass tube was sealed by heat, and they were then exposed to a heat of 140° C. for more than an hour. When used, the end of the tube was broken off and the spools were placed in the antiseptic fluid used for knives, etc. This method secured the catgut in convenient and absolutely aseptic, and in portable form. Bacteriological tests had been made.

Dr. Boldt thought moist methods gave as satisfactory results in the treatment of catgut as the dry method, but the chief advantage of Dr. Kiliana's glass tubes lay in their portability.

A Central Bureau for Trained Nurses.—The question of establishing a central bureau for registering and improving the status of trained nurses, under the general supervision of the County Society, had been brought to the consideration of the Comitia Minora, and Dr. Landon Carter Gray was requested by the President to make some remarks upon the subject. Dr. Gray thought all appreciated the necessity for some reliable means of obtaining nurses of whom something was known regarding their character and previous training. As we were situated in New York, in an emergency, we had to go to some training-school or bureau for nurses which, in his experience, were entirely unreliable. In the cities of Boston, Philadelphia, and Brooklyn there had been for a number of years a nurses' bureau. In Brooklyn it was under the patronage of the County Society, and every year the President appointed a committee of three or four members to take charge of it, this committee usually being continued year after year. They employed a woman, gave her a salary, she had rooms in the Society's building, and constantly supervised the work. Every nurse submitted to the committee, through this female superintendent, her diploma and credentials, which were then verified. Each nurse furnished the committee the names of physicians under whom she served, and these physicians were written to and asked their opinion of her qualifications, as to personal appearance, neatness, reliability, disposition to tell lies or the truth, whether loyal to the physician, or whether she interfered with his orders, etc. These bureaus had been found more than self-supporting, each nurse paying two dollars a year, and each patient employing one also paying two dollars for the privilege.

Dr. Gray then moved that the President be empowered to appoint a committee of three to take action in the matter and to set going such a bureau at once. The motion was adopted, and the president appointed Drs. Gray, Hanks, and Bullard.

A Committee on Croton Water Appointed.—Dr. F. R. Sturgis offered the following resolution with a preamble: Be it *Resolved*, That the President of this Society appoint a committee of five members to confer and act with the quarantine and Croton water-shed committee of the New York Academy of Medicine, and such other committees as are engaged in similar work, as may be deemed fit and proper.

Dr. August Seibert did not oppose the resolution, but expressed surprise that the committee of the Academy had said nothing about the necessity for filtering the Croton water as they did in Berlin, London, and Altoona, and which was necessary whatever might be done to prevent its previous contamination. Last summer Hamburg had not its water filtered, and cholera raged on one side of a given street which got its water from Hamburg, while on the other side of the same street, supplied by filtered water from Altoona, there were no cases.

The President explained that the committees would have the consideration of methods. The resolution being adopted, he appointed Drs. Daniel Lewis, Roosevelt, H. D. Chapin, William E. Ewing, and A. F. Currier.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, April 27, 1893.

H. J. Boldt, M.D., Chairman.

The Practical Significance of Shortening the Round Ligaments.—This constituted the general subject for discussion of the evening. It was opened with a paper by Dr. James E. Kelly.

The Anatomy of the Round Ligament.—Dr. Kelly gave a lucid description of the anatomy of the round ligament, with special reference to Alexander's operation, and clearly demonstrated the anatomy of the parts by drawings, dissection, and model. The round ligament really was not round. It would be more appropriate to speak of it, in connection with its coverings, as the cord. It arose from the anterior surface of the uterus and passed outwardly in the direction of the internal abdominal ring, which it entered, there being attached to it peritoneum; after entering the abdominal walls, it passed downward, inward, and forward, and, diminishing in size, finally became indistinguishable from the surrounding tissues at a varying distance above the pubis, sometimes passing down to the labium. The author dwelt upon the fact that the inguinal portion of the abdominal walls was divided into three strata, the middle stratum consisting of three layers, attached to the ilium, Poupart's ligament, and the pubic bone. They were the external oblique, the internal oblique, and transversalis, which united and formed the conjoined tendon as the cord finally made its exit through them, and the transversalis fascia. The cord received attachments from these parts from which it must be freed before traction upon it would draw the uterus up. The genito-crural nerve accompanied the cord a part of its distance. In Alexander's operation, after exposing the cord near the pubic spine, it should be freed from its fibrous coverings, and then traction should be made upon it as nearly as possible in the direction which it took from the uterus toward the internal ring, upward, outward, and forward. Dr. Kelly briefly passed over the steps of the Alexander operation, which he divided into four: 1, Opening of the canal; 2, finding the cord; 3, freeing the ligament and drawing the uterus forward; 4, fixing the ligament and closing the wound.

Finding the cord was one of the easiest procedures in surgery, as it was accomplished with certainty by raising the structures lying at the floor of the canal with a hook or the finger-nails. The third step, or freeing the ligament from its attachment and drawing it forward, was really the essential step of the operation, and it should be remembered that the other substances going to form the cord must be divided or torn before the ligament could be pulled forward, lifting the uterus. He had never failed to find the ligaments, but at times they were brittle, breaking easily.

Alexander's Operation in Boston.—Dr. F. W. Johnson, of Boston, read the second paper. He had a list of one hundred and eighty cases of shortening of the round ligament done in Boston hospitals, dating from December, 1889, to March, 1893. In a great many cases the result had been perfect at the time the patients were discharged from the hospital, and in most of those seen later the result had yet remained perfect. He thought objections to the operation had been based chiefly on theoretical grounds, or had been made by those without much experience with it. It was indicated: 1, For the cure of uncomplicated retroversions and retroflexions when the patient was desirous of getting rid of the pessary; 2, in the same displacements where the pessary could not be worn; 3, in the same displacements complicated by procidentia in second degree, and also in procidentia as an adjunct to plastic operations upon the vagina; 4, in certain cases of posterior and lateral displacement with a certain amount of adhesions. If much force were required to break up the adhesions it should be preceded by laparotomy; 5, for the cure of inguinal

hernia, the author having practised it in certain cases of hernia with excellent results; 6, it held the uterus up in cases of small fibroids.

The objections which had been offered to the Alexander operation were: 1, That the ligament was often absent, but this was not true; 2, that there was great difficulty in finding it, which also was untrue; 3, that it was a dangerous operation, likewise untrue, if it were at all properly done; 4, that it prevented the natural course of pregnancy, which it did not; 5, that after pregnancy the uterus returned to its former malposition, also an error; 6, that it might give rise to serious secondary difficulties, untrue in his experience; 7, that it was limited in its application; 8, that it would soon become obsolete. Instead of becoming obsolete, it was growing in favor

Regarding the danger of the operation, the author said Alexander had performed it eighty times, having had no deaths; in Boston different gentlemen had performed it twenty-five, sixteen, thirteen, and twenty-four times without a death; and the author had performed it, within about five years, one hundred and seventy-five times with only two deaths. Altogether in Boston the deaths had been, as far as he could learn, only three. In one of his cases he was yet inexperienced, and death was due to sepsis; in the other it took place on the sixth day from pneumonia. Altogether pneumonia had occurred in four of his cases, but they were hospital cases, and there seemed to be no connection between the operation and pneumonia. He had seen only one case of cystitis, due to washing out the bladder by the nurse. Phlegmasia alba dolens had occurred in one case. Neuralgic pain was not uncommon for a few weeks. Phenacetine usually relieved it. Done rightly, hernia would not occur. Sloughing of the wound was not uncommon, but its frequency diminished with experience. It was not dangerous if the pus was let out as soon as it formed. He had never known it to lead to intra-abdominal symptoms.

Dr. Johnson's preparation of the patient, with a view to secure antisepsis or asepsis, was rather an extensive one. At the opening he did not slit up the entire inguinal canal as Dr. Edebohls described later in the evening. He kept the patient abed two weeks, removing the sutures at the end of the first week. If possible the catheter was dispensed with.

Dr. George M. Edebohls agreed with Dr. Johnson, that it would hardly be possible for anyone to give a more lucid description of the anatomy of the round ligaments than had been done by Dr. Kelly. As to the indications for Alexander's operation given by Dr. Johnson, they were broader than he had acted upon thus far, but he thought it quite possible they would hold good in practice. A main indication with him had been movable retro-displaced uterus, tubes, and ovaries of normal size and free or only slightly adherent. Another main indication was prolapsus of the ovaries along with retro-displacement of the uterus. Enlarged ovaries and tubes with adhesions contra indicated the operation, because of the danger of freeing the adhesions. He had abandoned the Alexander operation in uterine prolapsus, for while it was successful in some cases where the prolapsus was of the second degree, in others it was not, although done in the same manner. He had never done the operation in hernia, but thought it might prove successful where the hernia was dependent upon dilatation of the internal ring.

He had done the Alexander operation in sixty cases, finding one hundred and twenty ligaments; in one other case he gave it up after failing to find the round ligament on one side, but he could not say it was lacking, although he thought it was atrophied, as the woman had passed the menopause. Three times the ligament had pulled out of the uterus, so that he immediately opened the abdomen and performed ventral fixation.

In operating he made a free incision down to the tendon of the external oblique, almost in the same line mentioned by Dr. Johnson, the points chosen by him being an inch above the middle of Poupart's ligament and the spine of the pubis. As it had been his custom the past three years to open up the inguinal canal, the next step in his operation, after finding the external ring, was to introduce a director up to the internal ring, generally an inch and a half, then slit the canal on this director. With the hook the muscular fibres of the internal oblique were then lifted, when the cord would be seen with its investing sheaths. The latter were stripped from the round ligament, after which traction would pull directly upon the uterus. The reflection of the peritoneum upon the ligament would, however, come with it unless it were stripped back at the internal ring with the finger as the ligament was being pulled out. This procedure stopped when the uterus was felt at the internal ring. The same steps were followed on the other side, and finally the ligaments were fastened and the wound closed. The manner of closure he thought made the occurrence of hernia impossible, while the method of opening up the canal possessed the advantages over the other method, that the ligament could always be readily found, and that it could readily be divested of its coverings, and the peritoneum be stripped back at the internal ring as the ligament was pulled out, drawing the uterus up. Sometimes the ligament did not extend outside the external ring, and in that event the method of operating by opening the canal became at once evident.

What gave him confidence against the occurrence of hernia was the fact that he closed the entire incision made in the tendon of the external oblique, at the same time securing the ligament with each suture passed through the tendon, usually putting in five to seven silkworm sutures along the canal, cutting them short and burying them. There had been primary union, no sloughing, in all his last forty cases except one. In drawing the uterus up, he relied entirely on the ligaments, putting no instrument into the uterine canal or vagina. He had had no trouble from cystitis. Before the Alexander operation he curetted the uterus, and put some gauze into the vagina, which was left in forty-eight hours after the Alexander. The urine was drawn two days, and subsequently after micturition the vagina was injected with one to three thousand corrosive sublimate.

As to results, he had been able to follow most of his cases, all having been operated upon since 1889, and in none had the uterus returned to its malposition. He thought so highly of the operation of shortening the round ligaments, that in his opinion its conception entitled Alexander, or someone, to immortal fame.

Feels Enthusiastic about the Operation.—Dr. Paul F. Mundé said he had performed Alexander's operation only forty-nine times, having heretofore been somewhat conservative in resorting to it because he had felt that the knife should not be used where a pessary would answer the purpose. But his results had been so good that he had come to feel enthusiastic about shortening the round ligaments, and he expected to resort to it oftener in the future. He thought adherent uterus and appendages constituted an absolute contra-indication. The only modification of this statement which he would make would be that, if he found on opening the abdomen the appendages were sufficiently healthy to be preserved and the adhesions could be broken up, he would not now do ventral fixation, but would open the inguinal canal and thus shorten the round ligaments. This would be better for the future interests of the patient than to ventrally fixate the uterus. In one of his cases the uterus had been prolapsed and it returned. He looked upon prolapsus in second or third degree as a contra-indication. He operated as Dr. Johnson did, not like Dr. Edebohls. An assistant lifted the uterus with a sound. Formerly he used split bone drainage, but the last year or two discarded it. Suppuration was rare. He sealed the dressing with iodoform. A pessary was worn three to six months as a precaution. He had never found it necessary to go to the internal ring, except in a few instances in which the ligament had broken. He often did other operations at the same time.

He was told that five patients operated upon by him had become pregnant, but he had seen only one of them.

Not so Enthusiastic.—Dr. A. H. Buckmaster, having noticed that in technique all the speakers had said they shaved the pubes, opposed shaving the hair in any operation, for cleanliness could be secured as well without it, if not better. Ordinary soap should not be used, but instead employ mollin or green soap. Operators had differed in regard to the indications for Alexander's operation, but there was a certain class of cases in which all thought it was applicable, namely, a small, freely movable, retrodisplaced uterus, unaccompanied by disease of the appendages. But he could cure such cases with the aid of pelvic massage and pessary unless there was a complication, occurring frequently although not usually recognized, where the bottom of the pouch of Douglas became adherent. The Alexander, like all other operations which held the uterus forward, would drag on the rectum and, perhaps, on the neck of the bladder, giving rise to distressing symptoms. The uterus being a movable organ, anything which lessened its movements could only be justified on the ground that a lesser evil was to be preferred to a greater. He would, therefore, restrict the Alexander operation to cases in which the adhesions had been divided and it was necessary to keep the uterus forward to prevent their reformation, and he would only resort to it when it was evidently superior to other modes of ventral fixation.

Dr. A. F. Currier thought the Alexander operation was the ideal one in certain cases, but he did not believe the time had come for abandoning the pessary entirely. If there were fixation of the uterus or appendages, the Alexander operation was contra-indicated, as it would be safer to open the abdomen and see what one had to deal with. He recognized the advantage of slitting up the inguinal canal even a short distance where the ligament could not readily be found, but he thought the method had been practised by an Italian before Dr. Edebohls.

Dr. Jones had not seen a perfect Alexander operation until he had witnessed the work of Dr. Edebohls. In his opinion, a substantial round ligament could not be found until the inguinal canal had been entered.

Dr. F. W. Grier had dissected with Adams, who, he claimed, had first done the operation of shortening the round ligament, and he felt sure much time and trouble would have been saved by various operators in finding the round ligament, if they had been acquainted with Dr. Edebohls's method. This method should at least be resorted to if on raising the fat which covered the external ring the ligament could not easily be found.

Dr. Vineberg held that any operation which fixed the uterus forward was not ideal. But it was the therapeutic results which we were seeking; not to fix an organ which naturally had a wide range of mobility, but to cure the patient. If men would try other methods they would not find so many cases in which it was necessary to do the Alexander operation.

The Chairman had abandoned the Alexander operation, and again took it up on seeing the method practised by Dr. Edebohls. While in the majority of cases it might not be necessary to split up the inguinal canal, yet in some it was very desirable and did no harm. He used drainage by silkworm gut as practised by Dr. Edebohls, and had not regretted it.

College Commencements.—The University of Louisville held its Commencement on March 13th, and graduated a class of 190. The University of New York held its Commencement on April 6th, and graduated 145 students. The Chattanooga Medical College graduated a class of 30 on March 15th.

Double Ovariotomy in a Pregnant Woman.—M. Polaillon has reported to the Académie de Médecine of Paris a case of successful ovariotomy in a woman three months pregnant. The patient went her full time, and was delivered of a healthy, well-nourished child.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CLOSING OF THE SESSIONS OF THE SOCIETIES—CLINICAL EVENINGS—AMPUTATION AT HIP-JOINT—ARTERIO-VENOUS ANEURISM—CHANCRE FROM A BITE—HÆMOPTYSIS IN AORTIC ANEURISM—LAMELLAR FIBROMA—MADURA FOOT—OPERATION FOR POUCHES OF THE ŒSOPHAGUS—DIET IN CHRONIC BRIGHT'S DISEASE—SMALL-POX—THE JACKSONIAN PRIZE.

London, April 29, 1893.

The close of the sessions of our medical societies is near, and the oldest of them (the Medical Society of London) has held its last ordinary meeting for this session, but on Monday next the annual oration is to be delivered by Mr. Mitchell Banks, which may be expected to prove a treat. His subject is "Physic and Letters," and after the address there will be a reception, and this is to be followed by a smoking (!) *conversazione*. What will the anti-tobacconists say? not to mention the non smokers, who will no doubt have serious thoughts on the therapeutical and hygienic properties of "the weed."

The last meeting was a "clinical" one, and a number of curious or instructive cases were exhibited. It must be confessed that the exhibition of living cases gives a freshness and an interest to an evening which can scarcely ever be afforded by elaborate papers and even thoughtful debates, and there has been a tendency of late years to make our societies more interesting and instructive by resorting more to these exhibitions and curtailing the essays. In this connection I may report that the Medical Society has determined next session to try fortnightly instead of weekly meetings. The plea for this change is the difficulty of bringing together every week a sufficient amount of attractive material. On the other hand, it may be found, as I have noticed in other societies, that members are often uncertain as to the week, and fail to put in an appearance, although this looks like a mere excuse, considering that the journals always give due notice of the meetings. Among the clinical examples exhibited was a boy of eight, on whom Mr. P. Symonds had performed amputation at the hip-joint, after excision for tuberculous disease had failed. It was said that this was the only case reported in which progression without a stick or a crutch was possible. Another case was arterio-venous aneurism between the arterio-dorsalis pollicis and the commencement of the radial vein, shown by Mr. Stonham, who proposed to apply elastic pressure over the tumor, together with proximal pressure over the artery, and if this failed to ligature the artery both proximally and distally. A man of thirty-five was shown by Mr. Hutchinson, Jr., with a chancre on the cheek from a bite he had received in a quarrel with another man, who, curiously enough, was also an out-patient under Mr. Hutchinson for secondary syphilis. Afterward a paper on hæmoptysis in aortic aneurism was read by Dr. G. Smith.

At the last meeting of the Pathological Society some interesting specimens were exhibited, of which I may mention a tumor, two and a half inches in diameter, shown by Mr. Shattock as "lamellar fibroma," perhaps quite as good a name as "corneal fibroma" used by Rindfleisch for similar formations. It was composed of dense fibrous tissue and the concentric striation could be seen by the naked eye. In its centre was a small piece of iron, eroded, and around this the concentric envelopes of fibrous tissue had evidently formed. The tumor had been taken from the front of the rectum, with which it was loosely connected, and the bit of iron had probably perforated the intestine and set up the new formation. It was remarked that epidermal implantation cysts excised from the palmar aspect of the fingers had a lamellar construction in their connective-tissue wall, and as to their causation the same factors were present, viz., foreign body and unrest. Specimens of mycetoma from Madura foot were

shown by Dr. R. Boyce and Dr. N. F. Surveyor. They had examined nine specimens of the black and eighteen of the white variety. In the white the particles closely resembled actinomyces. In the black they had succeeded in removing the coloring matter and then the fungus could be well seen and (after staining, etc.) its relation to the tissues discerned.

Dr. Hewlett also exhibited preparations, and drew attention to the value of the Ehrlich-Biondi stain for actinomycosis. Professor Crookshank referred to Dr. Vandyke Carter's researches and said the pale variety was identical with the actinomycosis of cattle, and both he and Dr. Ruffer insisted on the pleomorphic character of the micro-organism both in men and cattle. It is difficult, however, to impart to paper the interest of statements made in presence of the specimens.

On Tuesday (25th inst.) Mr. Butlin related to the Royal Medical and Chirurgical Society a case of "pressure pouch" of the œsophagus, typical in its situation and symptoms, on which he had operated with success. These diverticula usually spring from the junction of the pharynx and œsophagus and are directed backward. I think that though v. Bergmann and Kocher have both operated on such cases with success, this is the first case in this country. A long incision was made on the anterior border of the sterno-mastoid and the omohyoid muscle and superior thyroid artery divided. The carotid sheath was drawn aside. The pouch was easily found, separated from surrounding tissues, and cut away, the opening into the œsophagus being closed with fine silk sutures. Those who have watched the painful progress of these cases will be encouraged by the success of the few operations performed to offer the intervention of surgery to those who have so often succumbed to slow starvation.

Dr. H. White then read a paper on diet in chronic Bright's disease, founded on ten cases in which daily analyses of the urine were made for several weeks, amounting altogether to five or six hundred. The results will greatly encourage those patients who dislike milk diet, for the figures showed that nearly always more albumin was passed on milk diet than farinaceous, while on full diet there was less still. In rare instances, in which the maximum appeared on full diet, the excess of proteid in the diet more than compensated for the loss—so that full diet always best avoided loss of albumin. No very certain results as to the specific gravity were reported, and as to the quantity of urine of course much depends on the amount of fluid ingested. As to urea also the results were uncertain. The patients felt better on full diet, and Dr. White found that it did not lead to uræmia and he therefore recommended it as harmless and much preferred by the patients. Sir R. Quain protested against the indiscriminate use of milk and said mercury was often useful. Dr. Maguire considered the amount of albumin *per diem* of merely relative importance. In the early stage of granular kidney, when there was albuminuria with full pulse and laboring heart, full diet was not wise, but later on, when the heart was failing, it might be indicated. Dr. Broadbent considered the pulse tension and heart condition should guide the treatment. If peripheral resistance got the better of cardiac contraction, stasis in the cerebral arteries occurred and uræmic symptoms appeared. When these threatened, the treatment should not be low milk diet but a more liberal regimen, to diminish peripheral resistance and increase cardiac action. He agreed as to the value of mercury, which he found had more effect on tension than drastic purgatives.

Small-pox is steadily spreading and has frequently been carried by tramps to fresh centres. The night-shelters, established by philanthropy, seem often at fault, as they have no precautionary measures such as are taken by workhouses, etc. It would be well for the managers of such refuges to place themselves entirely under the guidance of the sanitary officials of their localities. If they do not the legislature might well place them under the same restrictions as common lodging-houses.

The Jacksonian prize has been awarded to Mr. Bland Sutton for an essay on diseases of the uterine appendages. The subject for next year's prize is the "Diagnosis and Surgical Treatment of Diseases of the Liver, Gall-bladder, and Biliary Ducts."

THE SYRINGE AS A CARRIER OF INFECTION

To the Editor of the Medical Record.

Sir: I have been impressed many times by a custom that is quite prevalent among the poorer classes of people, and which I consider a crying evil that we, as physicians, should do all in our power to eradicate by pointing out the danger.

This is the borrowing and lending of the family syringe, which cannot help being the source of many cases of puerperal septicæmia. This instrument, so potent for good when used as it should be, is certainly just as capable of doing much harm when in the hands of an ignorant midwife, or when it is going the rounds of the neighborhood.

Here we have a woman who has bought a fountain or Davidson's syringe or some of the other numerous syringes. Possibly she has uterine or vaginal trouble. Possibly she bought it because she had puerperal fever. Possibly because some of the family had to have enemata for appendicitis or impaction, or possibly because of specific vaginitis. Anyway, it was bought, used, and cleaned, as the word is used by the laity, and put away.

Neighbor B——'s wife has a baby and develops fever. She has no syringe, and the doctor says she must have vaginal douches.

Neighbor A—— has a syringe that is just the thing, and the nurse goes and asks for it: and who could refuse the request of a neighbor, sick nigh unto death?

No. "Take it and use it just as long as you wish, and God help the poor wife."

It is used, regardless of what it has been used for before, and after Mrs. B—— dies or gets well, it is cleaned (?) and returned, till neighbor C—— or D——'s wife borrows it because she is going to be confined or has been, and she probably takes an injection; and if she does not afterward develop puerperal fever, it is not the fault of the syringe nor of the germs that have been left in it to go the rounds of the neighborhood.

Or Mrs. J—— (who is a midwife and nurse) has a syringe that she uses on all occasions when it is needed. If a clyster is to be given, the syringe is used. If a vaginal douch is to be given for any purpose whatever, the syringe is used.

The physician does not know that it is not the syringe of the invalid or puerpera, and too many times he orders a douch of hot water, and it is given with a syringe that has been used for every conceivable purpose that it could be.

Only last week I attended a lady during her confinement, and she used a syringe that I found out afterwards belonged to a midwife; and the way I found out was that a few days later I attended a case of puerperal fever in a woman who had been delivered of a child by this same midwife.

I ordered among other things vaginal douches, and they went to the midwife; but she said she had let Mrs R—— (the lady I had confined) take it, and that they should go and get it, but should return it to Mrs. R—— as soon as possible—which they would have done if I had not happened to hear them talking about it and told them the consequence that would certainly befal Mrs. R——.

This is only one of many cases of the kind I have seen, and I have no doubt that all who have practised among poor people have had the same experience; and I am positive that many of the cases where the physician has thought he had shut off every avenue of infection, but still fever developed, and where he has come to the conclusion that child-bed fever is autogenetic, if he had examined the syringe used, and especially if he had followed that same syringe around the neighborhood and

seen the uses that it had been put to, and watched how it was cleaned afterwards, he would have been surprised if the poor patient had not developed fever; and I imagine if plate cultures were made of the filth that had accumulated in the recesses, you would get a variety of colonies that would startle you.

This has probably been written on before, but it will bear repetition, and if it should be the means of saving some poor puerpera from having puerperal fever, I shall feel well repaid.

ALBERT S. PAYNE, M.D.

EASTLAKE, MICH.

MEDICAL CHIEFS OF THE ARMY AND NAVY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In an editorial under the above caption you sum up the situation in these words:

"We cannot, however, escape the conviction, after taking all the circumstances into account, that the larger majority of the medical officers of the army and navy would be better satisfied by the promotions by rank and seniority than by any other means."

Exactly; no doubt the majority would, especially the lazy drones who crammed themselves for their admittance examination, and have performed their official duties ever since in a perfunctory way, doing fairly well what they were really obliged to do, and seat themselves in their official dignity and wait, Micawber-like, for some other man to grow old or die to advance them one step higher in the official scale in the corps, in which they should have been shining lights and faithful guides to other members of the profession not so happily situated, financially at least, as themselves.

How many men in the medical corps distinguished themselves in the old army? If my recollection serves me, one wrote a creditable journal of the Revolutionary War, and another made a successful amputation at the hip-joint.

In the new army—and by new I mean the reorganization since the rebellion—four men in the corps have more or less distinguished themselves. I refer to Woodward, Otis, Sternburg, and Billings. Three of these men have been on duty continuously in Washington, two of whom have died, with a fair amount of scientific and literary labor to their credit. The third still remains, and we can all judge whether, with the opportunity for scientific investigation, he has used his thirty-odd years in office to the very best advantage or not.

The fourth, Dr. Sternburg, has been posted about the country—hardly a year at any post—in the field, after hostile Indians, sent to various stations to treat and investigate epidemical diseases, and yet has found time—and, what is more to the purpose, has had the disposition—to inform himself on the etiology of infectious diseases; so that we may say he was one of the first, if not the very first, recognized authority on bacteriology in this country.

The busy medical man in general practice, especially if he has his living to earn, can scarcely be an investigator, in the true signification of that term; therefore we have no other source to look to, except to the medical corps of the army and navy, with the exception of possibly three of our universities and several infant laboratories.

The status of the medical corps of the navy is so deplorable that we cannot wonder that as yet they have done so little—we only wonder that they have done anything; and yet it is true, I think, to a certainty, that they have been the leaders in practical sanitation in this country.

We must, then, still look to the army for our scientific investigators. But what stimulus have they to work? Surely not promotion, for old "dry as dust," who sits in his tent from early morning till late at night, receives the promotion, simply, forsooth, because he outranks, by a few months' earlier admittance to the corps, the better man in every respect who is his junior.

What stimulus is there for work under such circumstances? This state of affairs has not existed in the line officers of the army. Mr. Lincoln did not hesitate to jump any number of seniors in appointing Sheridan, Schofield, Grant, Sherman, and a host of others, because of their distinguished services and their ability to command.

Why should not the same rule apply to the medical corps? Is there any sufficient reason why it should not? Would it not be infinitely better that workers who are in every way better qualified, even though they be a year or even four or ten years junior to another, have the promotion, and in that way hold out a living hope to any man who enters the service—the same chance of reward that good, honest labor commands in other walks of life?

Let the good man win, and let the drones go to the rear—their legitimate position.

THE OTHER SIDE.

ALBANY, N. Y., May 3, 1893.

CONSERVATIVE SURGERY IN APPENDICITIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the MEDICAL RECORD for April 15, 1893, Dr. E. C. Runge describes a personal experience with appendicitis, and decides against early operation in such cases.

Now, if we can have the report of the personal experience of a man who died of appendicitis, the two sets of deductions will make instructive reading. We all know of the old Puritan, who "could only look on just one side. If his, 'twas God's, and that was plenty." Dr. Runge seems to dread an abdominal scar more than he does a cocked and primed appendix. If he will come to New York I think we can remove his appendix through an incision less than two inches in length, and leave a scar which is barely visible six months after the operation. He can also be shown that the removed appendix was the seat of an infectious exudative inflammation which might never have given rise to further symptoms, or which might have caused mesenteric thrombo-phlebitis, or portal embolism, or general peritonitis, or abscesses, or any of the common and well-known complications belonging to an appendix, which had better be carried by a member of the criminal class than by such a useful member of society as Dr. Runge is known to be.

My own series of cases, though not large, is nevertheless instructive in this connection. It includes nine cases with abscesses and septicæmia at the time of operation, and a result of four deaths, and two ventral hernias among the five living patients. These were "conservative surgery" patients. My series contains also thirty-one patients operated upon in interval between attacks, or in the stage of colic, or in the stage of convalescence after an acute attack; and in this series there were no deaths and no ventral hernia after operation. These were "reckless surgery patients."

ROBERT T. MORRIS, M.D.

133 WEST THIRTY-FOURTH STREET,
NEW YORK, April 22, 1893.

Five Thousand Little Graves are dug each year in Philadelphia for little babies, and 5,000 little headstones are yearly set up over their graves, all due to deaths traceable to the diseases which spring from wrong feeding. In the overwhelming majority of instances the poor food of which the babies die is bad milk, diseased milk, or skimmed milk.—*Annals of Hygiene.*

Catching Cold.—Colds and acute lung and bronchial troubles are not nearly so much due to our climatic conditions as to our abuse of the means of protection against cold. The abuse is in living in unventilated rooms and heating them to a temperature above 70° F.—often much above. Hunters and trappers in our northern woods rarely "take cold," and the same is true of Arctic explorers.—*Sanitary Inspector.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 13, 1893.

	Cases.	Deaths.
Typhus fever	17	4
Typhoid fever	12	8
Scarlet fever	185	20
Cerebro-spinal meningitis	24	28
Measles	170	7
Diphtheria	137	28
Small-pox	17	3
Cholera	0	0
Varciella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

The American Girl as she Sometimes Is.—This young compatriot of ours no longer laces herself to breathlessness and a red nose and a pimpled forehead, pushing what flesh there is into regions where it makes deformity; she wears corsets, but only to outline and partially support, never to press or pinch, and thus her digestive organs are kept free to do their work and assist in preparing the rounded and velvety surface, the glow in the eye, the blush upon the cheek, the dye of the soft lips; for, unpoetical as it appears, the laboratory of beauty is in the stomach. In addition to all this, the American girl is no longer ashamed of her foot. She used to think it a disgrace if she wore a larger shoe or boot than a No. 2½; if she wore fours, she managed them; if she wore fives, she hid her foot. Now she understands that it is a law of statuesque beauty that a body should have an extremity apparently equal to its support—a woman a foot big enough to stand on, and *bien chaussée*, *bien gantée*, she never dreams of lengthening her skirt because her shoe is a six or seven, or of keeping her hands out of sight because they did not stop growing when she was ten years old. Owing to this last act of wisdom she can walk with freedom where she will, without pinched feet or any of the discomfort that urges her to sit still; and thus she takes with delight the exercise which does so much for her, which fills her lungs with fresh air and oxygenates her blood, and gives it all its life and sparkle wherever its effects are visible. After all, it is commonsense, the appreciation that nature says how much to eat and what to wear, that has reformed an ailing and early withered woman into a beauty of the old Greek type.—*Harper's Bazar.*

Intubation of the Larynx.—Dr. Béclère writes an interesting article in a Paris contemporary, of which the following is a summary: Tracheotomy and tubage of the glottis are two arms of unequal value which surgery presents to the practitioner in cases of acute or chronic stenosis of the larynx. The former is well known, and has proved its utility on urgent occasions in the hands of every practitioner. The latter, on the contrary, is of more recent date; imagined in 1858 by Bouchut for the treatment of croup, and rejected disdainfully by Trousseau and Bouvier, this method fell into oblivion. However, after thirty years it was resuscitated by an American surgeon, O'Dwyer, who modified with great advantage the instruments, and after having given satisfactory results in the hands of this intelligent surgeon, it found its way back to the Old World, and now forms part of the arsenal of those who make laryngeal affections their specialty. These specialists reserve in general intubation for chronic stenosis of the larynx, but its application can be more extended, that is to say, it can be resorted to with great advantage in acute stenosis produced by the false membranes of croup. Rather difficult to insert in a child—yet very possible—the tube has more chance of being placed without much trouble in the adult, who understands the advantage afforded to him over the cutting operation, and who consequently seconds the surgeon in his efforts to fix the instrument. Another advantage very apparent is that in the adult a large tube can be employed, which not only allows free respiration, but permits the false membranes to be expelled, an important point. Several cases are on record where O'Dwyer's method has been tried in France with perfect success.—*The Medical Press*, March 15, 1893.

The Cremation Question in Germany.—The question of the legislation of cremation has been debated in the German Reichstag. The subject was introduced by Herr Lingens, a member of the Centre, who expressed his regret that the Hamburg Senate had removed the previously existing restrictions as to that method of disposing of the remains of the dead, which he described as repulsive to Christian feeling. The speakers who followed Herr Lingens, however, including representatives of the *Freisinnige* party like Herren Schröder, Goldschmidt, Baumbach, and Langerhans, besides the National Liberal Herr Endemann and the Socialist Herr Frohme, argued strongly in favor of cremation, especially during the prevalence of epidemic diseases. Herr Baumbach gave notice that on the debate on the proposed new law for the prevention of epidemics, he would move the adoption of a clause making cremation optional throughout the German Empire. The debate seemed to show that the feeling of the Reichstag generally is in favor of cremation.—*British Medical Journal.*

A Danger to Surgeons.—An interesting observation made by Professor Albert on himself emphasizes the importance of caution on the surgeon's part in the use of poisonous antiseptics, especially corrosive sublimate solutions. At a recent meeting of the Vienna Medical Society the professor stated that for some time he had suffered from dyspepsia, for which no cause could be assigned by the physicians he had consulted. Lately the condition had become very troublesome, and the thought had occurred to him that the constant and free use of corrosive sublimate in his operations might have some share in the causation of the dyspepsia, by reason of the absorption of small amounts of this drug. Accordingly he had his urine examined by Professor Ludwig, the entire quantity passed during twenty four hours being tested. The examination revealed the presence of iodide of mercury in quantities comparatively large, if the manner of absorption of the substance be considered. While Professor Albert is not positive that his dyspepsia is due to chronic mercurial poisoning, he thinks that the fact that his finger-nails have lately become softer, and that he has lost three healthy teeth, seem to point in this direction.—*International Journal of Surgery.*

Menstruation and Ovulation.—The following conclusions are formulated by Dr. Charles C. Fowler in an article on the relation of menstruation to ovulation, published in the *Southern California Practitioner*, No. 2, 1893: "1. Ovulation can exist without menstruation, and the catamenial flow is not dependent upon the presence of a Graafian follicle within the uterus. 2. Menstruation is a function of the uterus that is governed by the vasomotor system, and is a phenomenon that takes place every twenty-eighth day because so much time is required for the uterus to accomplish its peculiar duty. 3. This function is peculiar to animals that assume the upright position, and is in no way related to the œstrus of lower animals. 4. In all cases where it is the prime object to stop menstruation, both ovary and tube should be taken, as by this means experience has proven we may often be successful in destroying the peculiar nerve-supply of the uterus."

A Case of Hæmophilia in a child two and one-half years of age has been reported by Dr. R. Demme, of Berne.

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OSMOTIC TREATMENT OF DISEASES PECULIAR TO WOMEN.

BY WALTER S. WELLS, M.D.,

NEW YORK.

At the late meeting of the Medical Society of the County of New York, held at the Academy of Medicine, April 24th, it was announced that I would be present to discuss a paper read by Dr. P. J. McCourt, on "The Non operative Treatment of Uterine Diseases."

The entirety of this programme having been interrupted by a severe illness on my part, I have been allowed the privilege of following the publication of Dr. McCourt's paper in the MEDICAL RECORD, in its issue of May 13th, and herewith return thanks for the courtesy.

It is now nearly four years since I became familiar with the processes advocated in the paper presented to the Society by Dr. McCourt, and during that period of time have amply verified the correctness of the salient points claimed.

Indeed, as the principles upon which this non-operative treatment are based are those laws of Nature relating to Endosmosis, Exosmosis, Capillarity, Diffusion, etc., well defined in works on physics—familiar to all students—there can be no question of the soundness of the theory, and very little probability of mistakes on the part of the intelligent practitioner who carefully follows the requirements essential in causing these laws of osmosis to become operative within the female pelvis, as remedial measures.

The cardinal law governing osmotic treatment is that the remedial application to the sponge must be a fluid of lighter density than that of the excretions it is to promote.

An exception to this is found in the use of glycerine, but this is explained by the affinity which glycerine has for all watery elements, and it accordingly acts only in promoting exosmosis of serum.

The failures in the use of sponge as a medium of uterine medication at the Woman's Hospital in this city—several cases of fatal septicæmia having resulted—were doubtless due to the sponges not having been made surgically and chemically aseptic.

The plan adopted by Dr. McCourt fully insures antisepsis.

As regards the enucleation of uterine fibroids by osmotic treatment, various specimens of which tumors were shown to the Society by Dr. McCourt, I have no doubt of the possibility of such results as claimed.

While I have not had enucleation of uterine tumors follow the osmotic treatment I have pursued, I have had quite as good results in the gradual lessening in size and final disappearance of such tumors during this treatment.

Inasmuch as the great majority of all intra-pelvic diseases of women are preceded and accompanied by congestion, eventuating in engorgement and inflammation, whatever treatment will establish drainage with reciprocal medication, must remove the congestion, engorgement and inflammation, and procure absorption of the products of such ensanguined stasis in the form of tumors of whatever name.

Medicinal endosmosis produces exosmosis of the debris of disease.

Without seeking to select any one class of intra-pelvic cases to the exclusion of others, it has happened that I have had a much larger experience with those in which ovaritis was a prominent factor, than any other of the subdivisions in gynecology; and in the relief of uterine, Fallopian, and ovarian inflammations—all of which usually more or less co exist—it is certain that the establishment of reciprocal medication and drainage, which endosmosis and exosmosis fulfil, has invariably resulted in restoring as nearly to a healthy condition as practicable, not only the uterus and the intermedial Fallopian tube, but the more remote ovary.

Since discussion implies differences of opinion, and as there was no discussion of Dr. McCourt's paper, I will presume to devote this paper to osmotic treatment of intra-pelvic engorgements—especially ovarian.

References to the literature of ovarian diseases show a remarkable unanimity as to what Sir Spencer Wells designates the "hopeless impotence" of their treatment by medicines.

The experiences of all authorities are "in melancholy accord" that the medical treatment of ovarian disorders, hitherto, has been nothing—the surgical treatment, everything.

Such prominent English authorities as Hunter and West deplored the inefficiency of their remedial resources in the management of these diseases, and were reluctantly obliged to consign to surgery—for removal—the ruins medicine could not prevent.

Even that expert English practitioner, Watson, was compelled to admit that in these cases he was "unable to reckon a single instance of success in their medical treatment;" yet urged that "we are bound to try what medicines can do, as it is still possible that we may, in some way, succeed."

Professor Simpson also became impressed with the unreliability of medicines in ovarian diseases, by any then known method.

This experience has been as pronounced on the Continent and in America as in England.

Sir Spencer Wells expresses his opinion of medical treatment of ovarian diseases, by advising to "palliate where you can" preparatory to the surgeon's knife.

While the scale of medical success in these cases has so persistently ranged very low, and the great search-lights of our profession have not succeeded in illuminating the path leading to the secret of successful medication of ovarian disease, independent of surgical resources—it has not followed that this problem was doomed to remain unsolved.

Recent experiences go to show that this desideratum is to be acquired through the media of the lymphatic and capillary vessels of the ovarian and uterine systems, quite as labyrinthine in mechanism as any of ancient Egyptian or Cretan construction.

By the adaptation of the principles mentioned, certain of Nature's laws, the systems including Molecular Motion, Osmosis, Diffusion, and Capillarity, the windings of these intricate vessels, which take the initiative in ovarian disorders, may be permeated, medicated, and drained of morbid deposits, thereby relieving their engorgement and, if so treated before their disorganization has occurred, will restore their functions.

Engorgements of the ovarian vessels constitute the first and principal dangerous condition to which these organs are liable, becoming more dangerous as the engorgement become more frequent and protracted, by reason of their tendency to eventuate in destructive changes.

The importance of a method, both simple and painless, which will promptly relieve such stagnation, restore the circulation, and obviate disorganizations, and in so doing prevent the future need of the surgeon's knife, must be apparent, since it is just what has been sought by the medical profession from the time ovarian diseases were first recognized by the early gynecologists.

The vascular supply of the ovaries is well known to be so abundant that disturbances are very common, and are especially aggravated by the periodical congestions incident to menstruation.

The ovaries are also subject to the distending and diminishing blood-pressures occasioned by disturbances in adjacent organs, through the intimate relations existing between their own and the plexuses of these viscera; while anastomoses of their nerves with those of the sympathetic often give rise to obscure reflex pains.

Inflammation of the Fallopian tubes or of contiguous tissues seldom exists to much extent without involving the ovaries, nor do these organs escape the consequences due to displacements or diseases of the uterus.

It is frequently difficult to determine between cause and effect when called late in cases of pelvic inflammation, whether the origin was in the ovary, the peritoneum, or in the contiguous parts, since the inflammation usually so soon involves all; nor is it very material, since the plan of treatment herein offered as a substitute for the inefficient routine thus far in vogue, is equally efficient in all these complications.

Considering possible complications, it may be well to remember some of the unusual accompaniments of ovaritis:

Acute ovaritis may occur in cases of severe eruptive fevers, in cholera, and in cases of poisoning by arsenic or by phosphorus.

It may result from the extension of gonorrhœal inflammation through the Fallopian tubes. Non-specific metritis may also extend its inflammatory action through these passages to the ovaries.

Sometimes the introduction of the uterine sound, curetting, incision of the cervix, or other operation may develop ovaritis.

Among the common causes of ovaritis is taking cold during menstruation, and the sudden suppression of the flow.

Puerperal septicæmia is regarded as a common cause of ovaritis—and is dangerous—being usually followed by abscesses or other destructive changes rendering sterility inevitable, as both organs are generally involved.

The pains of acute ovaritis are of a severe shooting character, radiating from the ovarian region; increased by pressure; and often accompanied by reflex disturbances, especially vesical and mammary.

Painful urination and defecation accompany, the latter being ascribed to the anatomical relations of the lower intestine to the left ovary, the one, for other reasons, most frequently affected by engorgements.

Diagnostic importance is attached to the peculiar boring character of the pain, the accompaniment of nausea if the ovary becomes pressed upon, and the painful defecation, as the left ovary is impinged during the act.

Efforts to walk during acute ovaritis cause pain in the groin and sacrum, running down the thigh, often so severe as to compel cessation and resort to the recumbent posture.

While lying down, the knee of the affected side is drawn up to relax the abdominal muscles.

Cases of ovarian disturbances alternating with parotitis have been noticed, similar to those liable in the male, as between the testis and parotid.

Complications of peri-ovarian inflammations almost invariably occur with the acute form of ovaritis, surrounding the diseased gland and usually fusing it, the Fallopian tube, and contiguous tissues into a mass.

We may thus find ovaritis, peritonitis, cellulitis, and salpingitis more or less present.

All produce pain, and are accompanied by the common conditions of inflammations, and all may be relieved by medical osmosis.

If the preliminary conditions of ovaritis, the congestion and engorgement, are not relieved, and inflammation follows to the extent of adhesions, it may safely be predicted that an ovary thus fused will never be restored to its full functional uses.

Complete resolution, such as may occur in other organs, is very doubtful as to an acute attack of ovaritis, and a condition follows of extreme susceptibility of the ovary to various irritations, settling in time into chronic ovaritis and degenerations—cysts, tumors, hyperplasia, etc.

If the acute ovaritis has proceeded to the extent of suppuration, the abscess may work through an adhesion formed with the intestine and discharge through this passage.

The chronic form is liable to be roused into activity, from time to time, and each revival of inflammatory conditions in such ovary tends to confirm degenerative changes.

The ovaries are also affected by conditions of the uterus which disturb the pelvic circulation, as in cases of subinvolution, tumors, or versions.

The left ovary being more frequently affected than the right, the explanation is given that it is caused by the repeated irritations it receives from pressure of the distended sigmoid flexure.

And, further, to the repeated engorgements it is subjected to by regurgitation in the left ovarian vein, which empties into the renal vein, as these veins on the left side have no valves; whereas, the right ovarian vein, emptying into the vena cava, has a valve, and is not subject to regurgitation.

Both these anatomical conditions favor obstruction of the venous circulation in the left ovary and may extend further, causing congestions and engorgements of the plexuses of veins and capillaries of the broad ligaments, Fallopian tubes, uterus, vagina, and rectum, all of which inosculate with each other.

Engorgement of these vessels, varying in degree, is the condition to be overcome when, from any cause, ovaritis is threatened or has occurred.

The minute labyrinthine tubuli of lymphatics of the ovaries coalesce into branches, as do those of the uterus, the Fallopian tubes, the broad ligaments, the rectum, the bladder, and other intra-pelvic tissues; while those of the cervix and the vagina also merge and inosculate, the first enumerated groups anastomosing by branches through the lumbar glands, while the latter pass through the sacral and iliac glands, to form further connections. The whole by their innumerable interlacings forming a complex circle lying, in part, beneath the mucous membrane of the cavities, collectively, of the vagina, cervix, and uterus, and easily influenced by medical osmosis.

Both the capillary and lymphatic systems of vessels—each subdividing into myriads of inosculations—each with its kind, yet both interminably commingling—are equally distributed through the pelvic organs and tissues, and are equally influenced by osmotic treatment, which is further facilitated by the absence in their tubuli of valves—a beneficent anatomical omission common to the peripheral subdivisions of both systems of vessels.

It is the osmotic influence through which we relieve both these systems of vessels of their congestion, engorgement, inflammation, and by early attention remove these conditions upon which morbid growths depend for their development.

Medical osmosis of that portion of the circle of lymphatic and capillary vessels lying in the submucous tissues of the vaginal, cervical, and uterine channels will relieve congestion and engorgement of the *entire* lymphatic and capillary systems within the female pelvis.

Students generally are familiar with the principles of osmosis, capillarity, and diffusion, and with the phenomena of double currents of different liquids, varying in density, passing each other in opposite directions through

the same tube, or through the same capillary channel, or, what is equivalent, through the same pores of a membrane placed between such fluids, as illustrated by the endosmometer of the laboratory.

This endosmometer, divested of technicalities, represents substantially a porous membrane held in contact with and between two fluids of different density, one on one side, one on the other.

At the risk of being accused of tautology we are constrained to quote that in the experiment, as usually illustrated in the laboratory, alcohol is placed on one side of the porous membrane, and water on the other side.

As soon as the temperature of all the components becomes uniform, endosmosis and exosmosis of the fluids respectively begin, the water passing through the pores of the membrane to mingle with the alcohol on the other side, while at the same time and through the same pores, literally capillary tubes, the alcohol passes to the opposite side to mingle with the water there. An analysis of the two fluids demonstrates this mutual interchange and admixture.

Many interesting illustrations of osmosis, capillarity, diffusion, etc., are given in works on physics, especially in Draper's "Medical Physics."

It is equally well known that the processes of osmosis, capillarity, etc., abound in nature—especially on a large scale in the vegetable kingdom—being the methods by which the sap in plants and trees passes from the roots to the topmost branches and leaves, in some trees up hundreds of feet. These principles of nature exert a quiet though powerful influence, unrestrained by the laws of gravity or atmospheric pressure, working as well *in vacuo* as in open space.

These combined principles, known to govern translatory molecular motion, may be utilized for the relief of diseases of the organs within the female pelvis accompanied by congestion, engorgement, or other evidences of inflammatory action present, as well as for the removal of the products of a former inflammation. In order to do this we must extemporize within the pelvis the conditions essential to set in operation an endosmometer. These essentials of the endosmometer we have seen, embody a porous membrane placed between two fluids of different densities.

Now, returning to the anatomy of the female pelvic organs, we find that the channels comprising the vagina, the cervix, the endometrium, and the Fallopian tubes, are covered by a large area of mucous membrane. This mucous membrane covers innumerable lymphatic and capillary tubes imbedded in the tissues immediately under the membrane, and the membrane itself is permeated by myriads of pores, which are real capillary tubes also, and these latter open in direct apposition with the openings of the submucous capillaries and lymphatics beneath the membrane. These two systems, the lymphatics and the capillaries, are filled in health with fluids, and, in certain abnormal conditions, with an excess of fluids, and surrounding exudations, more or less changed by diseased action into purulent, sanious, or mixed excretions, become deposited in the areolar tissues, or held in the calibre of the extreme ramifications of the lymphatic and capillary vessels themselves.

In certain inflammatory conditions of the endometrium the lymphatic vessels have been found opening upon its surface and filled with pus and excretions common to inflammation. If these excretory accumulations can be induced by osmotic influences to form an exchange with medicated solutions of lighter density, the inflammatory process will be arrested, the disease products will be drained away, and the functions of the lymphatics and capillaries will be restored to their condition in health. This can be accomplished by suitable osmotic appliances, properly medicated and adjusted.

As we have seen, nature furnishes in the intra-pelvic channels named at least two-thirds of the mechanism requisite in an endosmometer, namely, the lymphatic and capillary tubuli filled with fluids on one side of the porous mucous membrane, and these being endowed with vitality are pre eminently more capable of osmotic work than the inanimate constituents of the laboratory endosmometer.

In order to utilize these contributions of nature, it is necessary for us to find some material comprising an agglomeration of soft, flexile, capillary tubuli, opening in all directions upon its surface and inosculating within its body, and which shall be capable of holding in suspension a sufficiency of fluid, thus imitating the lymphatics and capillaries.

Nature has also furnished this material by giving us the fine Syrian sponge, which, as is well known, is an aggregation of soft, flexile, inosculating capillary tubes, forming an admirable counterpart to the living capillary and lymphatic tubuli distributed under the mucous membrane of the intra-pelvic channels, so far as the osmotic processes require.

When, in a suitable case, such sponge saturated with an aqueous or mixed aqueous and alcoholic medicinal solution is passed into the vagina and left in contact with the os and cervix uteri, where it will be easily retained by the vaginal walls, we have all the essentials of an endosmometer—that is, a porous membrane flanked on each side by an aggregation of capillary tubes filled with fluids varying in density.

The medicated solution in the sponge being of lighter density than the fluids in the parts beneath the mucous membrane, as soon as the temperature of the artificial contribution becomes uniform with that of the living structures the lighter fluid in the sponge will begin to pass by endosmotic influence through the pores or capillary tubes permeating the mucous membrane, to be taken up and passed onward in the lymphatics and capillaries distributed beneath this membrane and entering the parenchyma of adjacent organs. At the same time, under the influence of exosmosis, the heavier fluids, the purulent, serous, sanious, or mixed excretions, or *débris* of diseased action pass out from the living capillary tubes, through the pores of the mucous membrane into the capillary tubes of the sponge.

An exchange of fluids takes place upon the same principles that govern the exchange of fluids in the laboratory endosmometer, and we are thus enabled to simultaneously medicate and drain the entire circle of lymphatic and capillary inosculations in the female pelvis.

Even diseases of the bladder and of the rectum in the female are benefited by osmotic treatment, since this method reaches their branches of lymphatics and capillaries which inosculate with those of the vagina and uterus, and help to form the complex circle of these vessels previously mentioned.

It is known that, on account of these anastomoses of their circulatory and nervous distributions, a disease of one of the intra-pelvic organs may react upon any other and complicate the diagnosis.

In cases of ovaritis, salpingitis, endometritis, etc., with deeply-seated engorgement, we may find it expedient to resort to another appliance to facilitate osmosis, beyond that which the sponge alone can promptly accomplish.

It is desirable in certain engorgements to extend the osmotic medication and drainage higher and more directly upon the endometrium and Fallopian orifices, while at the same time the sponge is acting in co operation upon the vessels of the vagina, os, and cervix.

We accomplish the additional direct osmotic medication and drainage of the endometrial, ovarian, and Fallopian tissues by passing through the cervix beyond the os internum, and in apposition with the endometrium and the Fallopian orifices, a small spiral-wire tube covered by a closely-fitting sheath of woven texture, and containing within its calibre a sufficiency of capillary filaments to constitute substantially a loosely filling wick. The ends of these capillary filaments or wick project beyond the tube each about half an inch, and the tube so provided, being passed up within the uterus, that end of the wick rests within the endometrium and in close relations to it

and the Fallopian orifices. The lower end of the tube, if of proper length, will bring its projecting filaments just outside the external os uteri, and free to rest upon the sponge when saturated with medicinal fluid and placed *in situ* in the usual way.

The extremity of the tube to be introduced is made slightly bulbous to facilitate its retention, and the spiral form preserves the capillary filaments from being pressed upon as they lie within its calibre.

The sponge, being saturated with suitable medication and placed to embrace the os and cervix with their adjusted filaments, these latter—operating under the laws of capillarity and endosmosis, the same as govern the wick in the familiar house-lamp, in which even a heavy oil is elevated several inches—will draw the fluid from the sponge up within the endometrium and upon the Fallopian orifices, to become diffused over their mucous surfaces and absorbed through their lymphatics and capillaries. Exosmosis also becomes operative, and the fluid products of diseased action, effusions, pass out by the same channels in which the medication enters, into the tube and sponge.

It is quite common, upon the removal of the tube and sponge, to find them loaded with purulent or other excretions, and as long as these appear the treatment should be continued. When there is no further need of the osmotic course this is indicated by the condition of the sponge and tube upon their removal. They will be found free from excretions and the medicated fluid will not have been removed from the sponge by endosmosis.

The processes of medical osmosis are so moderate that the patient does not experience any inconvenience: they are absolutely painless, whereas injections into the uterine cavity are so painful and dangerous as to have been abandoned by prudent practitioners.

Aqueous, or mixed aqueous and alcoholic solutions of antiseptics, alteratives, anodynes, astringents, etc., varied as may seem suited to each case, are examples of the medications for saturating the filamentous tube and sponge, care being observed to avoid incompatibles, as well as to comply with the laws governing osmosis and capillarity.

The sponge and spiral tube should be renewed at least daily when they exhibit much purulent, sanious, or mixed excretions, and as often as night and morning if these are profuse and offensive. The tube, being emptied, should be thoroughly cleaned, sterilized, and new filaments introduced. The sponge should also be cleaned and sterilized by washing in several changes of water containing a small amount of ammonia. The sponge being provided with a string to withdraw it, we instruct the patient, in an ordinary case, to remove it after it has remained *in situ* for about twenty-four hours, to wash it in mild ammonia water, as described, and to bring it with her for remedication and readjustment. We then use the speculum to remove the tube, cleanse, sterilize, remedicate, and replace it with new filaments, and reapply the freshly saturated sponge in apposition with the os and cervix containing the new filaments, the same as at first.

In this way, by careful management, the same tube, with fresh filaments and the same sponge may be used over and over again.

In many cases, however, the excretions have been so chemically constituted as to destroy the cohesive properties of the sponge and cause it to disintegrate. The specimens shown by Dr. McCourt to the Society fully attest this.

The exigencies of practice will require a variety of sizes of sponge, but those about the size of a medium pear will be the average. If it just fills the vaginal space around the cervix its presence will not be realized.

We fully endorse the caution that these sponges shall have been properly cleansed, bleached, and kept chemically and surgically clean; and it should be kept in mind that if there is abrasion of the mucous surfaces to which the sponge is applied, only an uncut sponge should be used. A sponge should not have its cut surface placed upon an ulceration, for well-known surgical reasons, but the natural surface is free from the objection of adhering.

The sponge and tube used by one patient should not be used by another—each case should have its own, and strict antisepsis should be enforced.

In cases of uterine flexion producing a degree of bending and compression sufficient to maintain engorgement the capillary tube is especially useful, as it maintains the cervical canal patulous, allowing osmosis to proceed. At the same time, the flexion being corrected, by selecting an elongated sponge, it may be utilized as a pessary, as well as a feeder to the capillary filaments, one end of the sponge being placed to sustain the uterus, while the other end covers the os and its filaments.

To use the sponge as a pessary, it should first be wrung out nearly dry, and then placed to meet the indications, after which it is to be saturated, *in situ*, by a long-nozzled syringe charged with the medicated fluid. The saturated sponge becomes a soft elastic cushion, supporting the uterus and giving ease to any movement of the body, while simultaneously the osmotic processes go on. While in many cases where the tube with filaments is especially useful there is spontaneous dilatation of the cervix, yet cases may present in which dilatation will be necessary in order to introduce the capillary tube easily. The dilatation is to be done in the usual way, and the tube then placed, being handled the same as in introducing the tent itself. In few instances, however, will it be necessary to accompany the dilatation with an anæsthetic, or even a morphine hypodermic, since the tube is not larger than an ordinary sized sponge-tent, and will pass as readily.

It is exceedingly probable that degenerations of the ovaries, as well as of the uterus, have their origin in some one of the involved lymphatic or capillary tubuli, which, becoming obstructed during protracted engorgement, and unable to float away the clog, disorganization eventually occurs at this focus, ending in suppuration, or the development of some morbid growth. This would account for the frequency of such degenerative changes occurring in the many women who have suffered repeatedly from protracted engorgements of the ovarian system during the long years covering the menstrual periods from puberty to the menopause.

If there is that peculiar taint in the system predisposing to the degeneration of a tumor into a cancerous type, such carcinomatous developments will be apt to become demonstrative along toward the menopause and after.

Patients who have suffered from dysmenorrhœa for consecutive months, and extending through periods of years, are liable to final disorganization of the ovaries, the repeated monthly shocks of engorgement eventually destroying their functions and compelling recourse to surgery.

We have, by timely intervention of the osmotic treatment, arrested many engorgements, and, as far as time enables us to judge—several years of perfect health having succeeded—have saved many cases from degenerating into the destructive changes named.

What is said of dysmenorrhœa, regarding the prophylaxis of the osmotic treatment, applies equally to all diseases of the organs within the female pelvis. As congestion and inflammation are the initiatory stages of tumors, cysts, etc., this treatment, by aborting the cause, prevents the consequences.

It seems quite reasonable to assume that tumors or other morbid growths have their origin in some one or more of the involved lymphatic or capillary tubes, which being obstructed from protracted engorgement, disorganization follows, resulting in abscess; or, otherwise affected become the foci of the morbid developments, benign or cancerous, to which the female intra-pelvic organs are so liable. It seems equally reasonable to claim that if such engorgements are promptly relieved by osmotic treatment, then there need be fewer cases of women condemned to the perils of surgical operations.

Intelligent osmotic treatment will make recourse to the

surgeon's knife unnecessary in many cases where, heretofore, there has been no other means of relief.

If physicians, generally, will give this plan of medication a fair and patient trial, many of the dangers incident to surgical operations will be avoided, and the number of women in the future, with their full complement of anatomical details, will increase, and rejoice in the advantages it offers.

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CLINICAL NOTES ON CHANCRE OF THE TONSIL, WITH ANALYSIS OF FIFTEEN CASES.[1]

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The subject of the extra genital communication of syphilis, or syphilis as a non venereal disease, is one which has excited a good deal of interest of late years, and a large amount of clinical material has accumulated illustrative of widely different modes of communication, some of which were presented by the present writer several years ago;[2] the purpose of the present paper is to call especial attention to one particular locality of the infecting sore which has not received the attention which its importance and frequency warrants, and to emphasize some points which will aid in the recognition of the initial lesion of syphilis on the tonsil.

In studying recently the subject of syphilis innocently acquired, I have been many times struck with the very great frequency with which reference is made by older writers to the disease being acquired in the throat, and a more careful investigation of the data shows that the entry of the poison was very commonly through the tonsils. Thus, in all the descriptions of Sibbens, as it occurred in Scotland, in the radesyge of Norway, in the morbus dithmarensis of Holland, and other epidemic and endemic affections now recognized to be syphilis, mention is made that the disease was communicated largely by eating and drinking, and that the lesions first appeared in the throat. For a long time these conditions were not recognized as syphilis, the reason being stated that there were no lesions on the genitals, and that the disease was not commonly communicated by venereal contact.

Chancres have been reported of late years upon almost every portion of the buccal cavity, but other than on the lips and tongue the number have been very few as compared to those upon the tonsils. The reason for this is not difficult to discern. For the entrance of the syphilitic poison there must be a solution of continuity, and such abrasions are comparatively rare within the cavity of the mouth, while the constant secretions and movements therein tend to prevent the absorption of the virus.

But with the tonsils it is far different. Here the numerous crypts, often large and gaping and frequently the seat of inflammatory disease, form a ready nidus in which the syphilitic poison lodges, and from which it is not easily removed. Moreover, the movements of deglutition aid in forcing any syphilitic matter which may have been taken into the mouth into the follicles of the tonsils, which approach one another and often touch in the act of swallowing.

However it may occur, certain it is that chancre of the tonsil is a not very infrequent occurrence, although, as will be seen later, it very commonly escapes recognition because of the peculiar features presented by the sore in this locality.

In a recent correspondence with Dr. Cæsar Bœck, of Norway, a high authority on syphilis, he stated to me that next to chancres in the genital region he had found the primary lesion of syphilis most common in the throat. The explanation of this great frequency of the sore in this location in Norway is probably found largely in the customs of the country, where the domestic life among the poor is very intimate, a whole family frequently eating with the same spoon, one after another; possibly also it is in part due to climatic reasons, leading to greater prevalence of inflammatory throat affections. From what I know and judge from literature and correspondence, I do not believe that the frequency of throat chancres there is due to bestial practices, such as we occasionally meet with in this country and elsewhere. Among my own cases about to be mentioned there were only three which had this origin.

In examining the records of my private and public practice I find more or less complete notes of over two thousand cases of syphilis, extending back over a period of more than twenty years. The larger number of these patients came under my care on account of skin lesions, during various periods of the disease, generally after the primary sore had disappeared, and in some instances even very many years thereafter, and not more than one-third of the patients came on account of the local sore, or with its remains still present; it is, therefore, impossible to determine even approximately the number of instances of extra-genital chancre which occurred among them. For, while these latter would commonly attract attention and were always noted when present, still in the large majority of the cases of syphilis no record was made of the location of the primary lesion or source of infection: indeed, in very many cases these matters were not known positively either to the patient or myself. That there were very many more cases of extra-genital infection than are to be mentioned is beyond any question, for I do know positively that in a very considerable number of old cases it could never be determined how the disease was acquired, though in very many instances the proof was certain that it had not occurred by the venereal act.

Among these 2,000 cases of syphilis, however, notes of extra-genital chancres occur in 110 instances, or over five per cent. of the whole. The following table gives the location of the sore and the sex of the patients:

Table exhibiting Location of Extra-genital Chancres (Personal Cases).

Location.	Male.	Female.	Total.
Chancre of the lip	20	29	49
" " tonsil	8	7	15
" " finger	12	2	14
" " breast	0	7	7
" " tongue	3	2	5
" " cheek	5	0	5
" " eyelid	4	0	4
" " chin	2	1	3
" " hand	1	1	2
" " nose	1	0	1
" " ear	1	0	1
" " temple	0	1	1
" " neck	0	1	1
" " forearm	1	0	1
" " sacral region	1	0	1
	59	51	110

It will be seen here that chancre of the tonsil came next in frequency to chancre of the lips, the next most frequent location being chancre of the finger: thus there were 49 cases of chancre of the lips, and 15 of the tonsil, and 14 of the finger; chancre of the tonsil thus formed about fourteen per cent. of all these cases of extra-genital chancre.

Of the cases of chancre of the tonsil, curiously enough, the sexes were almost evenly divided, there being eight males and seven females. The ages of the patients ranged from eleven to forty-six years: the youngest, a boy of eleven, the son of one of the patients with chancre of the lip, the oldest, a gentleman aged forty-six, who had not been exposed sexually and had surely no genital or extra-genital chancre elsewhere; he had very characteristic chancres on both tonsils, with distinct hardness, and a most beautiful macular syphilide of two weeks' duration, with great malaise, etc.; all of the symp-

[1] Read before the New York County Medical Association, March 20, 1893.

[2] Non-venereal Syphilis, Transactions of the New York State Medical Association, 1886, p. 393.

toms yielded very promptly to mercury and chalk given every two hours. In this case, as has also occurred in a number of others, the physician bringing the case in consultation could not convince himself that the eruption was one of syphilis because of his inability to find the chancre and because of the absolute absence of venereal exposure.

The right tonsil would seem to be more liable to infection than the left; among these 15 cases the right tonsil was affected alone in 9 cases, the left alone in 3 cases, and both together in 3 cases.

Before calling particular attention to the clinical features to be observed in connection with chancre of the tonsil, I will give brief details of two cases, one male and one female, which are most perfect and typical, as full accounts of all the fifteen cases would occupy much time uselessly, and they will appear in detail in a work shortly to appear.[1]

Mr. X. R——, aged thirty-two, had what was supposed to be tonsillitis of the right side, six weeks previous to his visit, February 13, 1889. The swelling of the tonsil had not gone down, and a few weeks later a general eruption appeared, covering much of the body.

When he first came for treatment the right tonsil was seen to be large, projecting half-way into the throat: the surface of it presented a superficial ulceration, the edges of which were quite prominent; the glands beneath the right jaw were enlarged, with a smaller amount of adenopathy on the other side. There was a maculo-papular eruption on the body, which was fading.

In order to observe the tonsillar lesion more carefully, he was left two weeks wi hout specific treatment, and he was cautioned in regard to the danger of infecting others. On the second visit, one week after the first, it was noted that the margin of the ulcer was more sharply defined, and that there was a very decided hardness to the touch. He was given a strong chlorate of potash gargle and the non-specific treatment continued. The following week the characters of the chancre were even more sharply defined, and he was placed under active anti-syphilitic treatment, under which the tonsil gradually healed and the swelling lessened, and other phenomena passed away. A ringed syphilide appeared a month or so later, with abundant mucous patches.

No clue to the infection could be discovered; he drank beer rather freely, and thought that perhaps he had smoked another man's pipe. It should be added that he had no lesions on the penis or evidence of former venereal trouble.

Mrs. X. S——, aged thirty-two, who had been married ten years and was the mother of four children, entered the Skin and Cancer Hospital, February 28, 1890, on account of a diffuse, large, papular syphilide, tending to become pustular, on the scalp.

Her history was that about two months previous she had a severe sore throat, as her first symptom of ill health, which continued up to her admission to the hospital; this was accompanied with malaise and aching of bones. The eruption appeared first on the scalp, a few weeks after the throat became sore, and the hair began to fall rapidly, with the development of an eruption on the face, spreading downward over the body.

On admission both tonsils were found to be greatly enlarged, almost touching, and their surfaces seemed equally raw, with mucous patches abundant on the roof of the mouth and elsewhere in the buccal cavity

It was not until March 21st, three weeks after admission, that under most active mercurial treatment and many local applications the throat had improved sufficiently to admit of a positive diagnosis of chancre of the tonsil, although it had been supposed that the seat of infection was located there. The left tonsil had then sub sided very considerably, and was soft, leaving the right one standing out prominently, and presenting a rather sharply defined ulcer, and a very marked hardness to the touch.

No clue to the method of infection was obtained; her husband, from the description, probably had syphilis, but was never seen.

As the case was from the first suspected to be one of tonsillar chancre, the genital region was carefully and deeply examined, but no trace of an initial lesion could be found, although mucous patches were present, which had produced a soreness of the parts; these, however, had appeared a month and more after the first development of the lesions in the throat.

We may now consider some of the features common to these and the other patients, whose histories were very much like those which have been given. It may be stated that all the cases were seen and examined personally, many of them being under treatment almost from the beginning, and many of them continuing under observation for a long period thereafter. The longest period after the inception of the chancre at which any patient was seen was nine months. In ten of the cases the tonsillar chancre was observed at its height, in two cases the lesion had practically disappeared before coming under observation, and in two cases the process had retrograded greatly before being seen; but in all these cases, which were most carefully studied, the history and train of symptoms, with the condition of the patient then present, were such as to make the diagnosis absolute.

In all the cases there had been no diagnosis of tonsillar chancre previously; many of them had been treated as tonsillitis, one, at least, as diphtheria, one as grippe. It is fair, therefore, to suppose that the general profession, and even those engaged in throat practice, are not very familiar with the primary lesion of syphilis in this locality and are not on the lookout for it; one of my most marked cases in a young man was sent to a throat clinic by one of my assistants before I saw the case, and was there treated for tonsillitis with iron and chlorate of potash. In one of my cases in private practice a lovely married lady, whose husband I saw, and who was certainly free from syphilis, had what was supposed to be tonsillitis, but what she herself recognized to be something different, owing to the stony hardness of the tonsil; in a month or thereabouts, while she had great *malaise*, supposed to be due to the tonsillitis, an eruption broke out which was then called measles, and when the hair fell out it was thought to follow that exanthem. When she came to me with a palmar and plantar syphilide, a month later, there was still the hardness of the tonsil, greatly enlarged submaxillary glands of that side, and other manifestations of constitutional syphilis.

In most of my patients there has occurred as the first symptom a stinging pain in the tonsil to be affected, with a moderate pain on swallowing. The tonsil then swells pretty rapidly, so that at the height of the trouble it may project fully to the median line of the throat, and in some cases I have seen it enlarged vertically so as to reach above and behind the velum palati and below the ordinary visual line behind the tongue; in rarer instances the enlargement is not very great. The surface of the tonsil is always very red, but commonly, as in the primary lesion of syphilis of the penis and elsewhere, the ulceration is not a striking feature, indeed, in some instances, there is very little loss of substance. But with care there can always be made out some erosion of surface, and the margin of this, as in chancre elsewhere, will be well defined and sharply cut, although seldom much elevated. The base of the sore will generally be covered with a slight, whitish, sticky secretion, and does not strongly suggest ulceration. In some instances it is exceedingly difficult by simple inspection of the throat to determine exactly the true character of the lesion. But this is not to be wondered at, for in but few instances of chancres in other locations could the diagnosis be decided at once by a single inspection, and without using the sense of touch.

And here comes the most important means of diagno-

[1] Syphilis Insontium; a Clinical and Historical Study of Syphilis Innocently Acquired. Awarded the Alvarenga Prize, by the College of Physicians, Philadelphia, 1891.

sis, namely, the palpation of the tonsil, and this should never be neglected in doubtful cases. With the finger well guarded with carbolized vaseline, a thorough examination of both tonsils will generally throw much light on the character of the lesion. I find in my notes of these 15 cases that in 10 of them the hardness of the tonsil was a marked and distinctive feature; in the other 5 instances the cases were seen some months after the inception of the disease, but in 3 of them there was still sufficient induration to contrast strongly with the other, healthy tonsil.

This hardness of the tonsil is sometimes very striking, and I find recorded that several of my patients had themselves noticed the "stony hardness" of the organ. Epithelioma of the tonsil would, of course, simulate this hardness somewhat, but the rarity of epithelioma, especially at the age of early middle life, when most of these tonsillar chancres occur, would exclude this to a great degree.

As in chancres elsewhere there is commonly swelling of the nearest lymphatic glands, when the local lesion has become at all pronounced, so in chancre of the tonsil we have those beneath the jaw of the affected side enlarged, almost with the first appearance of the chancre. This enlargement of the submaxillary glands on the side of the tonsillar chancre was noted in every one of my cases, and in many had already been noticed by the patient.

In a number of the cases post-cervical adenopathy of the same side had also occurred, and in some there was pretty general glandular enlargement elsewhere by the time they came under observation.

The occurrence of the eruption should, of course, establish the diagnosis with certainty, but in several of my cases this was not the fact, as the physicians who had seen the cases could not believe the eruption to be syphilis, because of the supposed absence of the chancre, and the sure absence of venereal infection. As already remarked, the malaise, loss of hair, etc., is often explained as weakness following the supposed tonsillitis, diphtheria, or grippe which has affected the patient's throat.

It is to be remembered also that in certain instances the early skin symptoms are very light, and in some cases of syphilis I have known them to entirely escape the observation even of very intelligent patients; in a number of instances I have first demonstrated a macular rash to a patient and his physician: in the case already mentioned the early macular syphiloderm was supposed to be measles.

According to my observation the eruption in throat chancres has first developed about the head and face, extending slowly to the trunk and extremities, but I should not assert that this is always the case.

The syphilis arising from tonsillar chancre has, in my experience, generally run a pretty severe course, and in two instances in private practice, where it was acquired by young ladies, of highest character and position, from kissing those to whom they were engaged to be married, the course of the disease was frightfully severe, wrecking their lives. The observation has been made by others that syphilis acquired extra-genitally is apt to be very severe, and I have found this to be true in regard to a large number of patients who had chancres in other extra-genital localities than the tonsil.

In regard to the modes by which the syphilitic poison reaches the tonsils in these cases, it is often very difficult to determine the matter with certainty.

As already remarked, the earlier writers continually referred to the communication of the disease by eating and drinking, especially among the peasant communities of Europe, before the nature of the disease was known, and before the contagiousness of the mucous lesions of syphilis was recognized. And even in later years, cases are continually being reported as occurring from eating and drinking after a syphilitic person. Many, many cases are on record where chancre of the tonsil has occurred, often in aged persons, from the custom of tasting the nursing-bottle which has been in the mouth of a syphilitic infant. Many cases are also reported from smoking pipes after syphilitic persons, although more commonly the infection then occurs on the lip; many cases are also on record similar to those here mentioned, where the poison undoubtedly came from the mouth of others in kissing.

In my own cases there were three in young men where the lesion confessedly came from vile practices with their own sex, and one of these patients told me of a friend who had chancre of the lip from the same horrible source. In two of the cases, in young ladies, the contagion came presumably from kissing the gentlemen to whom they were engaged. One of these latter came later under my care with syphilis, he having also infected another lady with chancre on the lip, who was afterward my patient and whom he married. In another estimable lady the tonsillar chancre came also from kissing frequently a cousin, who had abundant mucous patches in the mouth, she also helping him to wash out the mouth. Of course the poison may have found access otherwise than by kissing, for several instances are on record where a troche, candy, chewing gum, etc., passed from mouth to mouth communicated syphilis. In two other cases, married women, the disease seemed to come from their husbands through the mouth; and in another case, a girl, aged nineteen, singing in the opera, it was probably from kissing. In three male patients the infection seemed to come from a drinking-cup in one, and from either drinking or smoking a pipe in the other two. In the boy, aged eleven, the poison probably came from his father, who had chancre of the lip and mucous patches in the mouth; but a female servant, from whom the father contracted the lip chancre, had also syphilis and also came to me for treatment. In two instances no probable hypothesis could be made: one was the man, aged forty six, with chancre of each tonsil, and the other in a lovely lady, aged thirty-three, whose husband was free from syphilis, and the only possible supposition was that the infection came from a public drinking-cup.

The treatment of chancre of the tonsil does not differ essentially from that of syphilis in general. It is well to remember, however, the probable severity of the disease from this mode of infection, both to warn the patient against neglect of the case, and to carry out efficient treatment long enough to overcome the disease. Very great care should also be exercised by the patient against infecting others, for not only is there much virulent secretion from the local lesion on the tonsil, but mucous patches in the mouth are apt to be very abundant and severe in these cases. Mercury should be given with a free hand from the first, and the full course of anti-syphilitic treatment carried out for two years, at least, according to modern rules of therapeusis.

Locally it is well to treat the sore, here as elsewhere, with occasional dustings with calomel and the black wash freely painted on; free gargling with saturated solution of chlorate of potash many times daily, helps greatly in removing the local trouble. Nitrate of silver, in solution, in moderate strength, may sometimes be painted over the sore with advantage.

In closing this clinical study of chancre of the tonsil, which has already far exceeded the limits intended, I wish again to emphasize the fact that I believe the primary lesion of syphilis to occur very much more commonly in this location than is generally believed to be the fact. Of these fifteen cases, twelve have been found in the ordinary run of my practice during the last ten years, that is, since my attention has been especially called to the communication of syphilis by innocent means, and since I have devoted much study to the subject. I believe if we are on the lookout for these cases they will be more frequently found, and many otherwise inexplicable cases of syphilitic infection will be cleared up and some innocent persons relieved of the suspicion of having contracted the disease by venereal acts.

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HÆMATOMYELIA AND ACUTE MYELITIS.[1]

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THE title which I have chosen for the following remarks may, I fear, be somewhat misleading, as it might be inferred that it is my purpose to treat exhaustively of these two subjects. I have no intention of attempting to do this, however, and shall confine my remarks to a brief discussion of the occurrence, causation, and pathology of these two affections, with the recital of a few cases apropos of some of my remarks. The detailed histories of the cases will be found appended to this article, but in order to emphasize the pertinence of some of the remarks, very brief abstracts of the cases are here presented:

CASE I.—A man in good health becomes paralyzed in all four extremities, without warning and without loss of consciousness. After recovering from the shock he is able to get home, and then the paralysis again comes on, but gradually, and lasts for about four weeks and is followed by a slow convalescence. The paralysis is mainly motor, the bladder, bowels, and sensation being only moderately affected, and fever and other constitutional symptoms are not prominent. Diagnosis: hæmatomyelia.

CASE II.—A man in fairly good health awakens after sleeping in an exposed place, to find that his lower extremities are powerless. Close questioning elicits the information that, some months before, he complained for a time of pains and stiffness in the back and legs. At the time of the attack there are scarcely any symptoms attending the paraplegia, with the exception of "pins and needles" sensation in the knees. A slow convalescence begins after two weeks, and is attended with exaggerated knee reflexes, muscular twitchings, and wasting of the muscles of the lower extremities. Diagnosis: hemorrhagic myelitis.

CASE III.—A previously healthy young man complains in the morning of weakness in the hands and wrists, after a short time weakness in both legs, and before night a similar condition in both arms; bowels, bladder, and sensation scarcely affected. A tedious convalescence begins after a month, and is attended with evidences of vasomotor paresis, muscular atrophy, and slight hemianæsthesia. Diagnosis: acute myelitis, mainly of the anterior horns.

Everyone will agree with me, I think, when I say that these two affections, hæmatomyelia and acute myelitis are of the rarest conditions affecting the spinal cord; and this is particularly so of the former. At the present day, however, few are willing to go so far as to say with Hayem, that hæmatomyelia never occurs as a primary affection, that is, without certain changes of a degenerative nature having preceded it in the spinal cord. It is, I believe, to a hemorrhage occurring without these antecedent changes that the term should be restricted, reserving for those cases in which such antecedent changes have gone on, the term apoplectic or hemorrhagic myelitis.

Of course, it is only possible to contribute accurately to the occurrence of this rare condition by recording cases in which a study of the symptoms has been made in connection with a carefully performed autopsy. Although I am unable to do this in the history of Case I., it is, I think, justifiable to record such cases, and to contrast the symptoms which they present with those presented by cases which were followed by autopsies, and thus the diagnosis properly corroborated. No one is more keenly aware than am I, that such a method is uncertain to a high degree, and that the conclusions thus drawn are not to be entirely relied upon.

We have, moreover, many examples of precedence in this respect. Such, for instance, as in two cases reported by Krafft-Ebbing,[2] one by Preston,[3] another by Dreschfeld,[1] two cases by Sonneman,[2] likewise two cases by Hoch,[3] a case by Boinet,[4] a case by Diller,[5] and several others.

Formerly it was considered that primary hemorrhage into the substance of the spinal cord rarely, if ever, occurred. This idea was fostered by Charcot and promulgated by Hayem,[6] and in England by many writers, among them Wilks, who says, in his lectures on "Diseases of the Nervous System," that he had never seen a well-marked case of hæmatomyelia. There can be little doubt now, however, of the occurrence of the disease, but truly as a rare affection. It is this rarity of occurrence that should prompt us to study the disease, and so insure us in not mistaking cases when we see them. Krafft-Ebbing states that out of two hundred and forty five cases of organic spinal-cord disease, in only three cases could the diagnosis of hæmatomyelia be made with any degree of certainty. Probably an analysis of collated statistics of spinal-cord diseases would give a much lower estimate than this. Whatever early knowledge we have of the disease we owe to Ollivier's renowned monograph on the diseases of the spinal cord, although Hutin was of the first, if not the first, to describe a case of primary spontaneous hemorrhage in the substance of the cord, the clot being found on post-mortem between the fifth and sixth cervical segments. Up to the time of the appearance of Levier's paper,[7] Ollivier's work contained an epitome of most of the knowledge on the subject. Since that time numerous writers have contributed to our knowledge of the subject, but none more than Hayem and Leyden.

Although there can be found in recent literature several cases reported of primary hæmatomyelia, I shall concern myself here but with one in which the diagnosis was rigidly confirmed by autopsy. This case was reported by Sharkey.[8] His case was a boy aged thirteen, who gave no family or individual history bearing on the disease, with the exception that while skating he had had many falls; the last one was more severe than the others, and had occurred three days before his admission into the hospital. After receiving this fall he walked home, and on reaching there felt pain in the left shoulder, abdomen, and legs. This was succeeded by rapid loss of power in the lower extremities, so that at the end of two hours he could not stand. The bowels became constipated and the urine retained. There was no tenderness over the spine, but sensation was impaired below the fourth dorsal vertebra. Just above the area of anæsthesia was a narrow zone of hyperæsthesia, and some numbness in the right hand was complained of. Knee-jerk on the right side absent, on the left side it was present but impaired. Abdominal and cremasteric reflexes absent, plantar reflexes fairly brisk. Pupils small and did not contract to light. Pneumonia supervened, and he died after this had continued for eight days. During this time he complained of headache, loss of power in the left arm, the legs remaining completely paraplegic. The anæsthesia disappeared except in patches, and he was troubled with painful twitchings and spasms of the extremities. The other symptoms remained the same. Autopsy showed an extravasation of blood occupying nearly all the transverse extent of the cord at the level of the third pair of dorsal nerves. The blood was coagulated and discolored at one spot only. Above the hemorrhage as far as the upper cervical region, and below as far down as the mid-dorsal, the anterior and posterior columns of the gray matter on the left side were converted into a cavity containing liquid black blood. The white matter was unaffected.

Here, then, is a case of primary hemorrhage into the substance of the spinal cord, with well-marked symptoms and detailed autopsy. There can be no question

[1] Read before the Neurological Section of the New York Academy of Medicine, January 13, 1893.

[2] Wiener Klin. Wochen., 1890, p. 939.

[3] Medical News, March 19, 1892.

[1] British Medical Journal, 1885, vol. ii., p. 837.

[2] Inaug. Dis., Berlin, 1890.

[3] Johns Hopkins Hospital Report, vol. ii., No. 6, 1891.

[4] La Semaine Méd., September 30, 1891.

[5] MEDICAL RECORD, June 6, 1891.

[6] Thèse de Paris, 1872.

[7] Inaug. Diss., Bern, 1864.

[8] London Lancet, May 23, 1892.

here, as has been raised in many cases, as to whether there had not been antecedent changes in the cord in the shape of softening. The previous history of the case entirely precludes such a supposition.

It is also very similar, except in its termination, to Case 1. In this case, considering the remarkably acute onset, the entire absence of warning, of premonitory symptoms, or of previous illness, the mode of development of the symptoms, the absence of fever, the acuteness of the pain and its rapid disappearance, it does not seem possible to place it under any other capitulation than that of hemorrhage into the gray substance of the spinal cord in the lower cervical region. Of necessity, considering the favorable outcome of the case, the hemorrhage must have been very small, otherwise such symptoms as tachycardia, disturbance of the pupils, and involvement of the muscles of respiration would have been present, and then death would have rapidly ensued. It is quite likely that after the onset of the symptoms, and while he was in bed, there was objective anæsthesia, but the physician who was called at this time saw him but once, and then did not examine him or make a diagnosis.

That the bladder and rectum were not involved to a greater extent than has been stated, was due to the location of the hemorrhage and its limited extent. The muscular paralysis, the vaso-motor disturbances, and the subjective anæsthesia would suggest that the greatest involvement was of the anterior cornua and the internal lateral column of the gray matter. The position of the lesion would likewise account for the nutrition of the muscles and their electrical excitability remaining free from marked changes.

The symptoms in this case could result from embolism of some of the larger arteries going to the gray matter of the cord, or to engorgement of the lymph-channels with consequent hindrance to the circulation of the cerebro-spinal fluid. It is not at all improbable that transient attacks of paraplegia are sometimes due to this latter condition. This has been proven experimentally by Rosenbach and Schtschkerback.[1] The symptoms in such a case would be of short duration, and if followed at all by after-symptoms, would be those of a low grade of inflammation or degeneration. Although the spinal vessels are very small, they may be occluded by the injection of inert powders into the circulation, with resulting sudden paralysis. This being proven, it can be easily seen how these vessels could be occluded by a thrombus or by micro-organisms, and it is barely possible that it is in this way that acute myelitis results after an attack of gonorrhœa, the specific germ getting into the circulation. This is, of course, pure theory, as the gonococci have not been found there, but other germs have. If the symptoms in this case were dependent on an embolus, there would have been present some of the preceding conditions such as we find when embolism occurs in other parts of the body, the brain, for instance. In our case the heart was normal, and there was no history of rheumatism or infectious disease.

The contrast between the symptoms in this case and that of acute myelitis will be given after the histories of the cases of myelitis are given.

I have previously mentioned that hæmatomyelia may recover, and have cited several cases diagnosticated during life and reported cured. That recovery may take place is conclusively proved by a case of Cruveilhier, in which the symptoms had come on five years previously and the patient recovered. A second attack at the end of this time carried him off, and at the autopsy a small old clot was found where the hemorrhage had been previously diagnosed. Most commonly it terminates fatally within a short time, as is shown by a case reported by Kindred.[2] His patient was a man fifty-nine years of age, in whom there was positively no history of syphilis or previous illness. At the moment of the appearance of the sudden pain and other symptoms he was making some mental effort. Without any prodromal sign he fell forward on the floor, at first feeling very slightly stunned as if from shock, but not losing consciousness, even momentarily. He had severe pain in the region of the heart, the dorsal region, spinal tenderness, and the cincture feeling over the chest and abdomen. After walking with assistance into the adjoining room, a thorough examination showed much anæsthesia below the fifth dorsal vertebra, with beginning paralysis. Reflex excitability diminished. Three hours after the initial symptom respiration was much disturbed, the pain, almost agonizing at first, had greatly subsided, while the power of motion in both legs was completely lost. Inability to expel either urine or fæces, and constant priapism. Temperature normal, pulse 98. Gradually the muscles of respiration became paralyzed, and he died six and one-half hours after the beginning of the attack, and the diagnosis was corroborated by autopsy, but no microscopical examination of the cord was made.

If the etiology of hæmatomyelia were under consideration *in extenso* the attributable causes might be divided, as they are in cerebral hemorrhage, into predisposing and exciting. Undoubtedly the same factors at work in causing degeneration of the vessels and the development of miliary aneurisms in other parts of the body, are operative in the vessels of the cord. The fact that the blood-pressure in the small spinal vessels is low and tolerably equable accounts for the infrequency of rupture of these vessels. The exciting causes may be stated to be trauma, direct and indirect, perversion of menstruation, diminished atmospheric pressure, such for instance as in caisson disease (Smith). Spontaneous hemorrhage, as in the case reported herewith, is particularly associated with severe bodily excesses, under which heading may be mentioned tonic and clonic convulsions, venereal excesses, etc. Leyden[1] considered that parturition was an etiological factor in his case, as the symptoms came on directly after labor. Lastly, anything that causes a great rise of blood-pressure may act as the exciting cause. On account of the greater size of the spinal vessels in the anterior portion of the gray matter, they are probably the most frequent seat of rupture.

The etiology of acute myelitis, on the other hand, is quite different. The disease itself is of very rare occurrence, and many cases diagnosticated as such are the beginning of degenerative processes principally the result of compression. Oppenheim says that after eight years in neurological practice he has seen but two cases of clearly defined acute myelitis. In looking through the files of one of the most prominent medical journals in this country for the past ten years, I have found the report of only four cases in which the diagnosis was evident. That it does occur, however, is shown by the number of autopsies of which we have record. Peabody has published two such cases,[1] in which the disease ran a very acute course, there being no appreciable causation and the disease terminating fatally in seven and four days, respectively. In his first case the clinical history is rather typical of Landry's paralysis. Yet on autopsy the anterior horns of the gray matter were degenerated throughout the cord, with evidences of perivasculitis over a wide area; the posterior horns, but more especially Clarke's columns, being but slightly affected. The second case reported by this same writer is a very interesting one; the history in brief was as follows: No apparent causation; the patient awakened with great frontal headache, and soon after complained of pain in the left knee: by the next night he had lost all power in the left lower extremity. The next day the right leg became paralyzed. There was no chill, no paræsthesiæ or dyæsthesiæ, no girdle sensation or formication: bowels constipated, urine had to be drawn. Temperature 103° F. The next day he became paralyzed in the upper extremities, and died on the following day from involvement of the muscles of respiration. Throughout the entire course of the disease sensation had not

[1] Virchow's Archiv f. Path. Anat. Phys. u. f. klin Med., October, 1890.
[2] Medical News, Philadelphia, February 13, 1892.

Zeitschrift f. klin. Med., vol. xiii., p. 235.
[2] MEDICAL RECORD, February 5, 1883.

been disturbed. An examination of the cord showed an acute destruction of the anterior horns throughout a large extent of the cord, intense vascular dilatation and perivasculitis, and an inflammatory destruction of the posterior horns and the ganglionic cells in Clarke's columns. Only on the peripheral portion of the cord were there any normal axis cylinders.

If there was but one such case as this on record it would prove the occurrence of acute disseminated myelitis. But numerous cases have been reported, among some of the recent being one by Sinkler,[1] another by Dana,[2] others by Oppenhein[3] and Friedlander.[4]

Our ideas concerning the causation of myelitis have within the past few years undergone a great change. Formerly the occurrence of acute myelitis was largely attributed to exposure, to cold and dampness, to strains, excesses, fright, and to trauma. But to-day there are not a few who refuse to believe that these factors can stand as the individual causation of acute myelitis. It is not consistent with our knowledge of exudative and destructive inflammations in other parts of the body, in the light of the progress of bacteriology, to believe that exposure to cold can set up an acute destructive inflammation in the spinal cord involving no greater geographical area than the breath of the finger. In the great proportion of the cases, if not in all, there must be some infectious or toxic element. This infectious element is the pathogenic germ, or the toxic substance manufactured by such germ, which attacks directly the spinal cord. It may be the pathogenic germ of gonorrhœa, or of pneumonia, or of diphtheria, or of typhoid fever, or of any of the other specific infectious diseases. From the cases that have been reported, it is not at all improbable that the first-named disease, gonorrhœa, is responsible for more than a few cases. It would have been of importance if this had been inquired into in Case III. appended herewith and in such cases as Sinkler's and those reported by Hun.[5] The toxic causes are perhaps not so frequent factors as the infectious element in producing the disease. Under the toxic causes I do not wish to include the mineral poisons, for they rarely, if ever, cause myelitis, but the animal poisons generated by pathogenic and non-pathogenic bacteria, particularly the latter. These suggestions are in a line with the progress that has been made in the knowledge of pathological changes formerly considered inflammatory in nature in other organs of the body, such as the kidney and liver. The fact that opportunity is rarely had to examine the cord after mild inflammations is unquestionably the reason why the same discriminations have not been so clearly made here as in other organs.

To Dr. C. L. Dana, of New York, the credit is largely due for showing that many of the so-called inflammations are degenerations *ab initio;* and for insisting on a more scientific classification of these affections, based not alone on experimental investigations but upon analogy.

Inflammation may be defined as the response of tissue to an irritant, accompanied by an increase in the circulation; a process of repair, while a degeneration, on the other hand, is the response of tissue to an irritant accompanied by a diminished or perverted blood-supply, a process of destruction or decay.

Thus the most common irritant, causing inflammatory changes in every part of the body, is some form of vegetable or animal life goes without saying, while the most common etiological factor in producing degeneration is some organic substance, such, for example, as the poison of gout, causing cirrhosis of the liver. The ordinary attributable causes of acute myelitis, such as cold, fatigue, depression, dampness, etc., are more likely to cause degeneration than inflammation, for the natural consequences of each one of them is to produce lessening and perversion of the circulation in a part. Such a condition very commonly precedes and seriously predisposes a tissue or an organ to inflammation, and not uncommonly is the thing which allows the inflammation to occur.

Especially is this so in so-called hemorrhagic myelitis as in Case II. This patient had been exposed to many of the above conditions, and probably a slight degenerative change had begun in his cord, and the symptoms at the time of the attack were due to small hemorrhages engrafted on such a condition.

Although this is a most fascinating line of inquiry to follow, I do not intend to concern myself with a further consideration of it here, excepting to say that in my opinion acute myelitis not limited to the anterior horns, scarcely, if ever, results from any causation except as eptic one. Acute limited transverse myelitis as described in the books, I believe to be theoretically an impossibility, clinically a rarity, and pathologically never found.

Case III., quoted herewith, is evidently one in which there was an inflammation of an acute character, principally in the anterior horns, although more extensive in the beginning. (For notes of this case I am indebted to Dr. Leszynsky.) It is almost a counterpart of a case reported by Sinkler, and already quoted. The autopsy in Sinkler's case showed acute myelitis involving the cervical enlargement. There was marked infiltration of the entire transverse section, with small, round, sometimes irregularly-shaped, cells. In the centre of the gray matter on one side, and posteriorly on the other, there was a small area of hemorrhagic softening. The vertical extent of the lesion was about one inch. It is to be remarked that in this case reported by Sinkler there was very little disturbance of sensation. Although it was not possible to follow up the patient the history of whom I have just read there can be but little doubt that he became a good example of anterior polyomyelitis adultorum. That is, the inflammatory symptoms other than in the anterior horns subsided, while the anterior horns themselves became degenerated in proportion to the intensity of the primary disturbance there.

I shall now pass on to a brief consideration of the differential diagnosis between hæmatomyelia and acute myelitis, based upon a study of all the cases which I can find reported since the appearance of Hayem's article.

A consideration of the mode of onset is the most important. If the appearance of the paralysis is preceded by symptoms lasting upward of a few minutes and of any intensity varying from the slightest, although the onset of the disease may in every other way suggest hæmatomyelia, it is safe to consider it hemorrhagic myelitis or acute myelitis. The occurrence of acute pain at the time of the attack, severe in nature and disappearing after a duration varying from an hour to a day, is suggestive of hemorrhage rather than of inflammation, while the presence of pain coming on a few hours after the attack points toward myelitis. The ability to use the extremity or extremities shortly after the shock and the rapidly recurring inability, is strong evidence of hemorrhage. The occurrence of a chill followed by the concomitants of fever, no matter how acutely the symptoms present themselves, is most presumptive evidence of inflammation, as is also the presence of any pathogenic or suppurative locus in any part of the body. The early appearance of trophic changes favors the diagnosis of acute myelitis. Likewise, anæsthesia is apt to be less well marked in inflammation than in hemorrhage, where frequently it resembles in its distribution the anæsthetic areas of syringomyelia; while the bladder and rectum are more liable to early involvement in acute myelitis than in hæmatomyelia. Rapid progress of the symptoms, and. on the other hand, rapid recovery, up to a certain point would tend to confirm the diagnosis of hemorrhage, as would also evidences in other parts of the body of diseased blood-vessels. The presence of exophthalmos, tachycardia, optic neuritis, and ascending course of the paralysis favor the diagnosis of acute myelitis. As a rule, the fatality is about the same in both.

That the differential diagnosis is an extremely difficult one to make and very often impossible is shown by a

[1] Medical News, November 7, 1891.
[2] Alienist and Neurologist, April, 1889.
[3] Berlin. klin. Wochen., No. 31, 1891.
[4] Inaug. Dissert., Berlin, 1891.
[5] Journal of Nervous and Mental Diseases, June, 1891.

case recently published.[1] The patient in question, a girl, thirteen years of age, arose feeling perfectly well, went downstairs, and commenced to wind up the window blinds, and while doing this both arms became suddenly paralyzed; an hour later the legs became weak, and by night they were completely paralyzed. The next day there was severe pain between the shoulders, which continued for about a week. With this there was retention of urine and incontinence of fæces. Following this, extensive analgesia, hyperæsthesia, and thermo-anæsthesia developed on the trunk and extremities. The patient died of what was apparently typhoid fever, some six weeks after the onset of the paralysis. On microscopical examination of the cord, an extensive and severe myelitis, affecting chiefly the gray matter, was found in the lower half of the cervical and upper dorsal region. There was no trace of hemorrhage. In the lower part of the ileum two small ulcers were found.

This case is seemingly in every particular a straightforward one of hæmatomyelia, yet on autopsy a most characteristic myelitis is found. It would seem to set at naught the statements that have been made in reference to diagnosis. In this case, however, there were two very important factors, viz.: In the first place, the patient remembered that she had felt chilly for two days preceding the paralysis, and secondly, the symptoms of enteric fever and the ulcers in ileum. It is a reasonable inference that the bacillus of Eberth was active in the system, though they could not be found after death, and it is more than likely that they were active in producing myelitis. The symptoms of hæmatomyelia in this case were so apparent that no suspicion of acute myelitis was aroused. This is, therefore, why so much stress is laid upon the statement above, that wherever any premonitory symptoms, such as chilliness, pain, stiffness, etc., precede the disease, or where there is any *locus* containing pathogenic or non-pathogenic bacteria, the chances are greatly in favor of myelitis, no matter how strongly the symptoms may point to hæmatomyelia.

In conclusion to this very imperfect presentation of this subject it gives me great pleasure to thank Dr. C. L. Dana for placing at my disposal some of his cases in Bellevue Hospital.

Case I.—J. A——, aged forty-seven, married, and of fairly good habits. Has never had syphilis, rheumatism, or gout, and has not been sick for many years. He has been a user of tobacco and liquor since boyhood, but rarely to excess. He was for many years a worker in the English coal mines, but for the past few years he has done ordinary laboring work. Up to the date of the present attack he was perfectly well. Eight weeks previous to his coming under our observation, one day while at his work and feeling entirely well, he became suddenly paralyzed in both arms and legs. This attack came on without a particle of warning, and while actively at work. It was accompanied by a sharp pain, as if he had been struck between the shoulders. His mind remained entirely clear, and he could think and talk all right. He states that he was unable to move either legs or arms for upward of an hour. He was then assisted, but not actually carried to his home, and placed in bed, where he remained for three to four weeks, and during this time he complained of trouble in seeing, unable to feed himself, or to get out of bed, or move about in bed, and he had some trouble with his bladder in the shape of vesical weakness. He states that he did not suffer very much from pain at this time except when he was handled. He says the hands, arms, and lower extremities felt heavy, numb, and wooden, although he thinks he could feel in them. His mind was never in any way affected, and speech remained undisturbed. After four weeks he began to improve, and on examination at his first appearance in the clinic he presented the appearance of a moderately well-nourished man, mental reflex apparently slow, pupils react normally to light and distance, but rather sluggishly to the latter, knee reflexes exaggerated, hands pale and cold to the touch, evidences of sluggish peripheral circulation; dynamometer, R., 30; L., 25. He says that he comes on account of the weakness of the limbs and because it hurts him to put on his coat and waistcoat, that is, when he uses his muscles he feels sore afterward. He complains that his hands swell when they hang by the side, and likewise his feet after he has been standing for some time. He does not describe a girdle sensation. The bladder is all right except that he has to stand for some time and make expulsive efforts before he can make the water come. Bowels are obstinately constipated. The feet feel heavy and clumsy, and the hands are weak and have lost their dexterity. Sensibility is not acute in the lower extremities, but in no one place can it be said that there is anæsthesia. He does not detect the difference between heat and cold readily. Gait not ataxic, but that of a person suffering from muscular weakness; station good. He complains of formication of the arms and legs, and fibrillary twitchings, especially at night, when it frequently keeps him awake. There is some quantitative diminution in the irritability of the muscles to the galvanic current, more marked on the left than the right side. Since that time the patient has remained in *statu quo*, apparently making but little progress toward a more complete recovery. There is a small amount of muscular atrophy in the extremities, but the patient is able to earn his livelihood by working about a store.

Case II.—Male, aged forty-three, of good family history, and had always been healthy. He denied syphilis, nor were there any manifestations of such infection. Had been a very moderate drinker and user of tobacco. So far as he knew he was in his usual good health up to Sunday, October 10, 1892. On the evening of that day he went to his work, that of a watchman in a building that was being erected, and about ten o'clock he lay upon some bags of packing and went to sleep. He awakened about one o'clock, but cannot say what aroused him at this time, except habit. When he attempted to arise he found that it was impossible to use his legs. Pain at this time or later, although present in the extremities, was not severe. He managed to attract the attention of a policeman, who called an ambulance and he was taken to Bellevue Hospital.

Physical examination showed the patient to be somewhat emaciated, visceral organs apparently normal, pulse full and rather resistant, superficial and deep reflexes in both inferior extremities exaggerated, no objective anæsthesias could be determined, although he complained of subjective anæsthesia, numbness, and a wooden feeling of his legs and feet. Bladder and rectum apparently unimpaired. Complains of pins-and-needles sensation in the knees.

On October 21st, that is, eleven days later, the patient has gained considerable strength in the legs, he can walk unaided across the room. Reflexes remain exaggerated, moderate ankle clonus on both sides, bowels and bladder unimpaired. The patient continued to gain strength and the pains and pins-and-needles sensation have disappeared.

December 30th.—Muscular twitchings in the legs have been troublesome lately, and have been most severe in the night, so as to prevent him from sleeping. There is evidence of vaso motor weakness, such as cold extremities, the feet sweat as he lies in bed, and a considerable redness in the upper part of face.

On close questioning, and repeatedly, it was brought out that about seven months previous to this attack on October 10th he thought he felt stiff in the joints, shoulders, knees, and across the lumbar region. A week or two before the attack he was taken with a pain in the inner side of the left thigh, which was so severe that the perspiration poured from him. This lasted about ten minutes. He is positive, however, that there was no impairment of muscular strength up to the day of his attack, neither had he received injury, nor been in any way exposed, except what he was accustomed to. The patient is still under observation but presents no symptoms or

[1] Lancet, January 21, 1893.

signs other than those referred to, with the exception of some wasting of the lower extremities, and this not to any great extent.

Case III.—J. B——, German, aged nineteen, occupation, grocery clerk, was entirely well until November 23, 1887, when he became paralyzed in all four extremities. The attack came on in the following manner: On awakening he felt a weakness in the hands at once and had a drooping of the wrists. His friends dressed him and he then walked downstairs; he had neither pain nor vertigo. After sitting for a while he attempted to arise and found he was unable to do so, but fell back and found that he could not even move his feet. Soon the arms became equally powerless. The bladder and rectum were all right, and there were no other symptoms. He was admitted on the evening of the same day to the New York Hospital, where a diagnosis of acute anterior polio-myelitis was made. There was no history of injury, exposure, or recent fever, and the patient denied ever having had syphilis. The family history was excellent. He remained in the hospital until February 20, 1888. The hands and arms recovered partly in a month, and by the end of two months they were quite well. Shortly afterward the right leg began to improve, and a few weeks later was also moderately well. Six weeks later he had sufficient strength in left leg to be able to stand, and a month after this he was able to leave the hospital and considered himself nearly recovered. The left arm and hand showed the least improvement, and they were slower in recovering than the right; that is, it was nearly six weeks after the right hand had recovered that the left began to show improvement, and even at this time he was able to use it but very little, and it was for treatment of this left arm and hand that he applied to Dr. Leszynsky.

The left leg he considers a little weaker than the right, but this does not trouble him very much. He is somnolent, the bowels are regular and the appetite very good. He says that while he was in the hospital he occasionally urinated in bed, and even now this occurs once in a while, though not often. There is no headache, no pain in the back, but he complains of being easily fatigued, and is weak. Repeated examination of the urine shows it to be normal in every respect.

Examination.—Gait good, stands easily on right leg, no static ataxia. Knee-jerks exaggerated, more marked in the left, and also marked ankle clonus in the left leg. No ankle clonus in the right leg. Some resistance in right leg, but not so good in the left. Upper extremity, resistance good. No ataxia. Dynamometer, R., 70; L., 0.

Paralysis affecting left hand (principally the ulnar distribution, the median but slightly). Atrophy of all the muscles of the left hand, most marked in the thenar group; right thenar group also slightly affected. No sensory disturbance. Atrophy of the shoulder muscles mostly marked in the left supraspinatus and deltoid. The eyes showed unequal pupils, the right larger and not so responsive to light, later the right only accommodated reaction.

March 15th.—R., $\frac{20}{20}$ — H. $\frac{1}{48}$; L., $\frac{20}{20}$ — $\frac{1}{36}$. R., Jaeger No. 1, 6 feet; L., Jaeger No. 1, 4½ feet.

Respiration mostly of the costal type, diaphragm weak. Chest of a rachitic build, heart and lungs normal. Deep depression over the scrobiculus cordis. Both cremasteric reflexes good. Plantar reflex markedly exaggerated in right, and normal on the left. Lower extremities, tactile sense normal. Pain sense he thinks is somewhat diminished. Temperature decidedly affected from the borders of the ribs downward. On the right side there is a complete perversion, he is able to tell warm but not cold. Slight ataxia in the left lower extremity, due to weakness (knee-test), triceps reflex well marked in both arms. Both hands somewhat cyanosed, more marked in the left than the right. Left patellar clonus marked. Weight sense normal. March 19th. No sensory disturbance. No loss of weight strength in upper extremity.

Electrical Examination.—Faradic current, musculo-spiral, median and ulnar right side, 13½ mm., good. No reaction in thenar group. With the same current a similar reaction on the left side, with the exception that the reaction in the ulnar nerve was slow and protracted, and no faradic reaction in the small muscles of the hand.

Galvanism, right musculo spiral, 3½ MA CaCC good; median and ulnar the same. Extensors of forearm, 6 MA CaCC good. Thenar group, 10 MA An CC> CaCC, but slow. Hypothenar, 3½ MA CaCC> AnCC, fair. Interosseii, CaCC good.

Left musculo-spiral, 2½ MA CaCC fair. Median, 1½ MA CaCC fair. Ulnar, 2 MA CaCC equal AnCC. Thenar group, 6 MA AnCC feeble. Hypothenar, 5 MA AnCC equal CaCC. Interosseii, 5 MA CaCC feeble.

Measurements of arm over deltoid showed the circumference of the right to be one inch greater than the left, forearm semiflexed showed a similar discrepancy in measurement.

March 15th.—Surface temperature (Fahrenheit thermometer, 3 minutes): Left temple, 88; right, the same. Right cheek, 90; Left, 87. Left palpebral fissure slightly smaller than right, and left eyeball slightly retracted, showing sympathetic nerve disturbance. Has hemianæsthesia on the right side below the fourth rib, both anterior and posterior, and over this area he calls cold bodies warm. Scapular reflex absent. During the past few days there has been exaggerated bladder reflex.

March 29th.—Perimetric field normal. The veins in the left fundus are larger than in the right. At this time the patient was lost sight of and never seen afterward.

153 Lexington Avenue.

EXTENSIVE WOUND OF THE ARM AND AXILLA — HEALING WITHOUT CICATRICIAL CONTRACTIONS.

By A. RADCLIFFE, M.D.,

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In cleaning the saws of an eighty-saw cotton-gin while it was running, the man's shirt-sleeve caught in the saws, dragging him on to them. His arm encircled the saws, and the breast-board, weighing about one hundred and fifty pounds, fell upon his back and held him there until the engine was stopped. Besides some small cuts about the face, the upper lip was split in two places, the lower lip cut clear across, so that in protruding the tongue it came out through the cut. The shoulder was dislocated backward. Commencing at the middle of the first phalanx of the little finger, which was cut nearly off, the skin on the inner side holding the digit and sustaining vitality, the cuts were every three-fourths of an inch apart on the ulnar side of forearm, up to two inches below the elbow, cutting very little deeper than down to the muscles. The cut over the styloid process of the ulna was, however, deeper, as was the one immediately below the elbow. Extending upward from two inches below the elbow, the skin and fascia were cut off from the posterior half of the arm and shoulder, hanging in narrow strips, thick with cotton and dirt. All the skin of the axilla was cut away, and a place about five inches by six inches, extending down the side of the chest from the axilla, exposing the lower edge of the pectoralis major and latissimus dorsi, and the whole width of the teres major, the muscles forming the borders of the axilla. The several cuts about the abdomen and front of the chest were hardly more than scratches.

After the torn flesh had suppurated and granulations started, I first made a support by fastening two shingles together at their thin ends, separating the other ends as the letter V, filling the trough thus made with cotton, for the whole forearm to rest in, the apex resting in the folds or doubling of a cloth belt, which was stiffened with a thin strap of iron, and supported by wide shoulder straps. This did admirably, but there was needed a support from the elbow up. Another V was put to support the arm. This did nicely for a day or two, until I could make the wire support as here illustrated. The patient wore it day

and night, and it is easily to be seen how he supported it comfortably by pillows. The height can be adjusted by the shoulder straps, and each support admits of separate

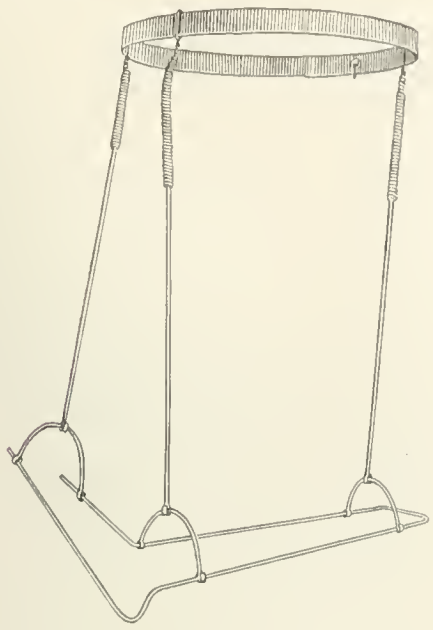

Fig. 1.

adjustment. The cloth strips upon which the arm rested made it easy to dress the extremity. Though the axilla was all scar tissue, the man had a good arm with perfect motion, being able to raise this elbow as high as the other. So much skin and fascia of the circumference of the arm was lost, that the contraction in healing reduced

Fig. 2.

its size a little. There were some skin grafts put on that assisted in healing, I donating some small ones from myself, in the hope of thereby inducing his relatives to contribute.

PARACENTESIS OF THE PERICARDIUM THROUGH THE FIFTH RIGHT INTERCOSTAL SPACE.

By OWEN H. WILSON, M.D.,

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Though a valuable therapeutic measure, tapping the distended pericardium is usually suggested only as a last resort, on account of the fear of wounding the heart, an accident which has sometimes proved fatal. The site selected for the puncture has been on the left of the sternum, usually about the fifth interspace, under the probably mistaken idea that the heart is floated upward by the effusion, which, while not yet proven false, is based upon questionable observation. Tapping the pericardium through the fifth right intercostal space was first suggested by Dr. Roteh, of Boston, after a series of careful experiments on the cadaver, by which he has clearly demonstrated that in uncomplicated cases even a small amount of fluid introduced into the pericardial sac will cause absolute dulness on percussion in the fifth right intercostal space, which is normally resonant. In one experiment on an adult cadaver this sign was elicited after the injection of only two and one-half ounces, a quantity which is declared by many diagnosticians too small to be recognized. In extreme cardiac dilatation, which condition more closely than any other simulates pericarditis with effusion, there may be relative dulness on the right of the sternum from the second to the sixth rib, extending as much as an inch and three-fourths in the third interspace, and one inch in the fifth; but rarely or never is absolute dulness to be found in the fifth right intercostal space due to simple cardiac enlargement. Absolute dulness in this interspace is not only of great diagnostic value in differentiating this condition from cardiac enlargement, but offers a site for aspiration of the distended sac with no possible danger of wounding the heart. We must, however, remember that the area of flatness due to pericardial effusion may be affected by various pathological conditions: on the right side of the body a solidified lung may confine even quite a large quantity of fluid chiefly to the left side; or retraction of the lung may be prevented by pleuritic adhesion, when only relative dulness would be found in this interspace.

Wade W——, aged thirty-six, was seen in February last; diagnosis—pericarditis, with effusion, complicating acute Bright's disease. Symptoms very distressing; apex beat imperceptible; area of absolute dulness extending from one inch external to left nipple to two inches beyond right border of sternum, and between the upper borders of the third and sixth ribs, rather broader below than above. As the effusion showed no tendency to disappear, fifteen ounces of clear serous fluid was withdrawn through ordinary aspirating needle, inserted in the fifth right interspace, about one inch from the sternum. Patient was greatly relieved, but the effusion rapidly reaccumulated, necessitating a second aspiration two weeks later, the needle being introduced about the same place, and twenty ounces of similar fluid withdrawn, with immediate relief of the severe symptoms.

While Dr. Roteh has repeatedly demonstrated on the cadaver the advantages of this puncture in removing the pericardial effusion, this, with the exception of one by Professor Epstein, of Germany, is the only case reported in which the distended pericardium of the living subject has been tapped through the fifth right intercostal space.

Home Rule and Irish Charities.—It has been pointed out that if Home Rule becomes law, the Dublin hospitals will lose their annual grant of $80,000, while half the cost of the medical charities, some $400,000 a year, will be placed on the Irish rates.

The Odor of Iodoform is said to be effectually masked by the ethereal oil of coriander in the proportion of eight drops to the drachm.

OSTEOMA OF THE ORBIT.[1]

By FRANK N. LEWIS, A.M., M.D.,

NEW YORK.

Comparatively few cases of osteoma of the orbit have been reported, and the subject, as far as I can learn, has received little attention, either in the text-books or in the journals. Probably this is due to the fact that the disease is of somewhat rare occurrence. Dr. J. A. Andrews, in the New York Medical Record, September 3, 1887, has a paper on this subject, in which he describes two cases of his own and also reviews the literature up to that time. Since then Dr. Pooley[2] has reported a case where he successfully removed a large osteoma. Dr. Knapp[3] has also reported a case, and others are described by Grossman,[4] Jones,[5] Adamük,[6] and Watson.[7] These cases have shown much variation as to size, location, and the facility with which the growth has been removed. The consistency also has shown much variation, from rather soft bone to that of a hard ivory character. In some of the cases there has been a distinct narrow pedicle springing from either the frontal, ethmoid, or superior maxillary bone, while in other cases the attachment has been broad and firm. As to the etiology, it has not been shown in all cases to be very clear. Traumatism, no doubt, has been an important factor, either as a primary cause or as an exciting cause of more rapid development of an already existing osteoma.

The case which I desire to report here came under my care at the Manhattan Eye and Ear Hospital, and through the kindness of Dr. Roosa I was permitted to operate for the removal of the growth.

Andrew P——, twenty-seven years of age, a blacksmith's helper, was admitted to the Manhattan Eye and Ear Hospital on May 10, 1892. The patient was fairly well and strong, and stated that he had always been in good health. There was no history or indication of syphilis or other disease. He stated that about eighteen months before, his wife had noticed that the right eye seemed to be more prominent than the left. Two months before this, the patient was struck by a stone on the right mastoid process. The wound healed quickly, and there had been no trouble at this point since. A few days before the protrusion of the right eye was first noticed, he had been bitten on the bridge of the nose by a dog. This wound also healed quickly and had given him no further trouble. There was a history of no other injury. The exophthalmus had gradually increased. There had been no pain, redness, or swelling of the lids or eyeball, and the vision had remained good until three months ago, when it began to fail and had gradually grown worse. No treatment of any consequence had been followed.

The Tumor in Different Aspects.

On admission to the hospital the condition was as follows: V. R., $\frac{20}{70}$; V. L., $\frac{20}{20}$. The right eye was pushed forward, downward, and outward. There was no redness of the lids, except that the palpebral conjunctiva was slightly redder than the left, and there was some lachrymation. The eyelids could be closed and the motion of the eyeball was good in all directions except upward, where it was slightly limited. The cornea, lens, and vitreous were clear and the pupil responded well to light. With the ophthalmoscope there was seen to be well-marked optic neuritis. The disk was not much swollen and the retina was clear, and there were no hemorrhages. There seemed to be no pain or tenderness on pressure. Above and extending behind the eyeball a firm mass could be felt. It did not give the sensation of hard bone to the finger, as, from what was subsequently learned at the operation, the growth was deep in the orbit and there was much soft tissue in front. It was decided to attempt the removal of this growth, and on May 14th, with the assistance of Dr. Roosa and Dr. Emerson, the operation was performed, ether being given. A free incision, one and one-eighth inch below the superior orbital ridge, was made, and extending from above the inner to a point outside the outer canthus. After dissecting down through the soft tissue, the hard, bony, irregular mass was reached, about one-half inch behind the orbital ridge. It was firmly implanted against the superior and inner walls of the orbit, and no well-defined pedicle was to be made out. The growth was removed with the chisel, and its removal was accomplished with much difficulty. It was attached by a broad surface to the frontal and the ethmoid bones, and a point of the growth extended to, if not into, the optic foramen. On removal it was found to be of ivory hardness, irregular in shape, with smooth surface. Its weight was thirty-one grammes, or nearly one ounce. The longest diameter was 45 mm. by 24 mm. On the inferior surface was a deep groove, which probably lodged the optic nerve, and from pressure may have been a cause of the neuritis, as this groove must have nearly encircled the nerve. The cavity was thoroughly washed and some small chips of bone removed. The wound was closed with sutures and a drainage-tube inserted. The operation was done with thorough aseptic precautions. On recovering from ether, the patient vomited blood, and there also was blood coming through the nose on the right side, showing that there was a communication between the orbital and the nasal cavities, and this was also later shown in dressing the wound, as fluid could be forced through the drainage-tube into the nose.

During the evening the dressings having become saturated with blood, they were removed. There was swelling of the lids and chemosis. On the following day, the patient having slept fairly well during the night, the dressings were reapplied. There was swelling of lids, and conjunctiva and eyeball still somewhat protruding.

On May 16th, two days after the operation, the patient was taken with vomiting during the afternoon, and at 6 P.M. the temperature was 106.3° F., and pulse 128, irregular and intermittent. There had been no chill. There was no delirium and the patient very rational, but having some pain. Wound redressed, and in washing through the drainage-tube fluid passed into the nose. Hot applications were kept constantly applied. Morphine was given hypodermically, and patient was sponged with alcohol

From this time on the patient made a steady but slow recovery, the temperature gradually subsiding. There was much swelling and redness of the lid and destruction of the epithelium, but the deeper parts of the lid healed well. Some suppuration from the cavity in the orbit followed, but this gradually subsided. The eyeball did not become inflamed, the cornea remaining clear. The vision became much worse; two days after the operation there was only perception of light, and at the end of seven days there was no perception of light. Nine days after the operation there was some paralysis of the left hand, the patient being unable to close the fingers, but had good use

[1] Read by title at the New York State Medical Society, February 7, 1893

[2] Transactions of the American Ophthalmological Society, 1890.

[3] Archives of Ophthalmology, March, 1888.

[4] Ophthalmic Review, December, 1887.

[5] Transactions of the Ophthalmological Society of the United Kingdom, 1888.

[6] Archives of Ophthalmology, vol. xix., 1890.

[7] Transactions of the Ophthalmological Society of the United Kingdom, 1889–1890.

of the arm and forearm. This paralysis lasted for three days.

The swelling and redness of the lid gradually subsided and suppuration stopped. The communication with the nose remained for two weeks.

The patient was discharged from the hospital June 27th, six weeks after the operation, and at this time the wound was well healed. The eyeball was still somewhat protruding downward and outward. There was ptosis and inability to rotate the eye upward or outward. The optic disk showed white atrophy.

The patient has been seen since, the last time was in October, four months after leaving the hospital, and at this time there was less exophthalmos, although still very apparent. There was better motion of the eyeball and lid. A small sinus at the outer angle of the wound. Patient has no pain.

Remarks.—Some points about this case are worthy of consideration. As to the cause of the growth, the patient gave a history of two injuries, one on the right mastoid two months before the exophthalmos was first noticed, and the other, a bite on the nose by a dog, about the time the exophthalmos appeared. It is doubtful to my mind whether either of these injuries was more than an exciting cause of increased development of an already existing osteoma. The size of the growth is also an interesting feature. From the displacement of the eyeball previous to the operation it was hardly to be expected that the growth had attained the size which it had. On placing the mass in the orbit of a normal adult skull, it more than filled the cavity. In its original position it had involved the ethmoid and was pushing its way into the nasal cavity, a free communication between the orbit and the nose following the operation. The danger of meningitis, which has followed in some of the cases reported, was kept in mind. As the tumor extended well into the optic foramen, and as the ivory hardness and firm, extensive attachment rendered necessary considerable traumatism in the removal, this danger was rather increased. No well-marked symptoms of meningitis did appear. A slight paralysis of the left hand occurred nine days after the operation, and it may be doubtful whether this was from meningeal or cerebral trouble. The rise of temperature to 106.3° F. on the second day made the outlook for recovery doubtful. No antipyretic medicines were employed other than sponging with alcohol, hot applications to the eyelids, and morphine to relieve the pain. The nutrition of the patient was carefully attended to, and this probably had much to do with his recovery. The optic atrophy which followed was chiefly from traumatism at the operation, but as there was already, before the operation, optic neuritis, atrophy would have been expected had no operation been done.

127 Madison Avenue.

Progress of Medical Science.

Creation of Ureteric Fistula in Advanced Uterine Cancer.—Dr. Jaboulay, of Lyons, has long noticed, as the result of *post mortem* examinations, that when cancer of the uterus invades the broad ligaments and ureters, the patient naturally succumbs to obstruction to the escape of urine. (*The British Medical Journal.*) On June 9, 1892, a woman, aged fifty-three, was admitted into his ward with anasarca of the face and extremities. She was semi-comatose, and could only say that she had passed no water for a week. There was advanced cancer of the cervix, and only a few drops of urine could be drawn off from the bladder. An incision about four inches long was made along the outer border of the left sacro-lumbalis muscle. The aponeuroses were divided, and the retro-peritoneal connective tissue exposed. The left fore-finger was introduced into the wound, and a soft compressible cord, apparently as thick as a finger, was detected and drawn to the surface. It was clearly the ureter. On puncture with a bistoury a jet of urine escaped with great force. The puncture was extended, till an aperture four-fifths of an inch was made, then a hollow sound was introduced, and the edges of the wound in the ureter sewn to the incision through the integuments. A small drain was placed in the upper end of the ureter. When the sound was taken out the ureter slipped back, drawing with it the edges of the skin. Jaboulay thinks that it would have been best to divide the ureter transversely and fix the ends separately to the skin wound. Urine flowed away very freely after the operation, but on the second day the patient was very ill. Jaboulay therefore decided to open the right ureter. As there were objections to laying the patient on her left side, he performed a "paraperitoneal" operation, and succeeded in dragging the ureter forward. It was opened, fixed to the wound, and drained. Urine escaped at once, but the temperature rose high on the second day, complete suppression occurred on the third, and the patient died on the fourth. The kidneys were found small and atrophied, with dilated but empty ureters. Jaboulay maintains that the operations which he performed were justifiable; unfortunately the case was too advanced. He regrets that he left drainage-tubes in the ureters.

Enlarged Spleen in Children.—Dr. Kuttner maintains the uselessness of the percussion dulness in ascertaining any splenic enlargement in children. Dislocation of the spleen from pressure from above the diaphragm, and the very rarely movable spleen, must be distinguished from the enlarged spleen. Acute enlargement occurs as in the adult, especially in the acute infective illnesses; among these illnesses, less generally recognized as causes of splenic enlargement, meningitis, vaccine intoxication, icterus, etc., are mentioned. As to diphtheria there is some difference of opinion. In scarlet fever and measles enlargement of the spleen is frequently mentioned by writers. It may also occur in faucial angina and erysipelas. Sometimes, however, the enlargement has existed before the illness, and to avoid errors this must be borne in mind; changes in the size of the spleen may then be of service. Chronic enlargements may result from cardiac disease, and much more rarely from genuine portal obstruction. The enlarged spleen of malaria, leukæmia, and pseudo-leukæmia are well known. In sixty cases of rickets observed by the author the spleen was enlarged in forty-four. The first symptoms of rickets—dyspepsia, intestinal catarrh, etc.—may exist for some time before the affection of the bones permits one to say that they are due to rickets. When discussing congenital syphilis as a cause, the author says that this affection leads, in the majority of cases, to rickets. He does not give any numbers in regard to the relation of this form of syphilis to enlarged spleen. A cachectic appearance, with a yellowish-white waxy-looking color is apparently only present in children when the splenic enlargement is considerable. Examination of the blood gives too variable results to be relied upon.—*Berliner Klinische Wochenschrift.*

The Period of Invasion of the Prostatic Urethra in Cases of Acute Gonorrhœa.—Dr. Heisler reports the results of his investigation of fifty cases of gonorrhœa. He finds that in twenty per cent the prostatic urethra becomes affected in the course of the first week; in thirty-four in the course of the second week; in fourteen per cent. in the course of the third week; in twenty per cent. in the fourth week; in four per cent. in the sixth and seventh weeks; and in two per cent. in the second and third months. According to the author the constitutional condition does not play any rôle in the etiology of posterior urethritis.—*Western Medical Reporter.*

A Case of Acute Orchitis Following Influenza was reported by Dr. T. Gordon Kelly in *The Lancet* for February 13, 1892.

MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE THERAPEUTICS OF PNEUMONIA AND THE PETRESCO TREATMENT.

WE understand that the physicians of this city have been particularly impressed in the last year with the severity and high mortality-rate of the cases of pneumonia occurring here. This has been particularly the case, at least in the large hospitals. In most, if not all, of these the death-rate has been from twenty-five to over thirty per cent. The frequent complication with alcoholism and neglect does much to increase this mortality-rate; yet it does not obscure the fact that the disease has been particularly virulent at times.

The disease is one which always holds itself as a sort of spectre over the adult. The fear of it adds to the burden and care of life, while its onset produces panic and too frequently leads to untimely death. Pneumonia in 1892 in this city was more fatal and much more prevalent than phthisis. Throughout the country, three out of every two thousand people die of it yearly, while at a low estimate eighteen out of every two thousand suffer from it. In other words, there are ninety thousand deaths from pneumonia annually in the United States, and probably over seven hundred thousand cases.

We have learned a great deal of late years as to what pneumonia is and why it is; but it must be admitted that the therapeusis of the disease has not advanced. Periodically there appear new methods of treatment, and a review of them would make an interesting tale of shattered hopes and broken idols. They also reveal the extreme ingenuity of the medical mind, an ingenuity which we feel sure will eventually secure for us a therapeutic triumph over the disease. Witness, for example, the Frankfort physician, Clemens, who cures pneumonia by using spirits of chloroform, which "defibrinizes" the blood. We can count a list of ten physicians who favor the use of ergot, because it contracts the pulmonary arterioles—although, as a matter of fact, it cannot possibly act upon them except in the feeblest way: then there is Dr. Simpson, who practises pulmonary phlebotomy and draws blood directly from the inflamed area. Dr. Pignol tries to kill the pneumococcus and injects solutions of naphthol directly into the trachea. Many persons would rather have the pneumonia. Dr. Crocq tries to dry up the secretion by giving ten to fifteen grains of acetate of lead daily.

Many have tried and still employ the calomel treatment of pneumonia. This drug is given in single doses of twenty or thirty grains, or according to Zakharini and Smakovsky, in grain doses hourly. The blister treatment has lately been recommended again. Fenwick's article on the treatment of pneumonia was quoted by us a year ago. He reduced the mortality to ten per cent. by the use of cold in various ways, the ordinary death-rate being twenty per cent. Yet Bennett has reported a death-rate of only six per cent. under expectant treatment, and one of three per cent. under tonic treatment. The strychnine treatment is much in vogue in our hospitals to-day, but the total results are certainly not brilliant. Much has been heard also of the dosimetric or regulating method, which consists in giving frequent doses of arseniate of strychnine, digitaline, and aconitine. But this treatment has also failed to secure a hold in most of our large institutions where many cases are treated and where therapeutic conclusions can be best drawn.

Last of all we venture to present a new treatment for which extraordinary results are claimed. It is a treatment devised by Dr. Z. Pétresco, Professor of Therapeutics at Bucharest. The plan was first recommended in 1883, after it had been tried for two years. In the same year Dr. Brailov, a pupil of Pétresco, gave a favorable opinion of the digitalis treatment. Petresco again wrote upon this subject in 1884, reporting 100 cases. Another article was written upon it in 1886 by Dr. Pacleano, reporting 182 cases. In response to some criticisms, Petresco had made an analysis of the digitalis used in Bucharest and found it as strong as preparations used in Berlin, Paris, and Strasbourg. In 1887 M. Antonin published a doctorate thesis giving the results of Pétresco's treatment in all his cases of pneumonia from October, 1886, to July, 1887. He states that the mortality was reduced to 1.21 per 100 among 577 cases. Pétresco reported the results of his treatment again at the Therapeutical Congress at Paris in 1888. Naturally he was rather severely criticised by the eminent gentlemen who heard him.

In 1880 one of Petresco's pupils, Dr. Constantinesco, published a thesis in which he reported 816 cases treated, with a mortality of 2.06 per 100.

After eight years of persistent work Pétresco succeeded in getting his method tried elsewhere. In 1891 Dr. Filk, of Vienna, reported 61 cases treated by large doses of digitalis with a mortality of only one. The previous mortality had been 15 per 100. From the same city, however, there came a slight set back to the practice. Professor Drasche used the drug in doses of three to four grammes daily—doses smaller than those recommended by Pétresco, and got unfavorable results. In April, 1892, Dr. R. Hoepfel, of Barnan, reported good results from the high dosage.

Several Paris physicians have announced their general belief in the harmlessness of digitalis in very large doses, but give no specific reports upon its use in pneumonia.

Such is the state of the case at present. It will be seen that Pétresco is still backed up almost entirely by his own statistics because his method has not been extensively tried elsewhere. Still he has made out a very good case for himself, and has at least proved that the pneumonia of Bucharest is best treated by digitalis.

The method itself is simple. The patients are given from four to six grammes (sixty to ninety grains) of powdered digitalis daily. The medicine is administered every one or two hours in the form of an infusion.

THE RECRUDESCENCE OF LEPROSY.

Mr. William Tebb, a London gentleman who has been very active in the anti-vaccination propaganda, has written a book which may be regarded as one of the most curious freaks of modern times. The book is called "The Recrudescence of Leprosy," and it aims to show first, that leprosy is increasing, and second, that the increase is due to the unholy practice of vaccination!

Mr. Tebb seems to have a mind that is completely enslaved by a single idea, and this idea is that compulsory vaccination is a vicious and villainous conspiracy of science against the public health and private morals; that by it doctors are steadily instilling virulent poison into the babies of the race, which insidiously saps their strength and robs them of their vitality. If Mr. Tebb did not make it clear that a passionate conviction of this kind guided his pen, we might still say that he had produced a book of some utility. For he has collected a large number of statistics showing the extent and distribution of leprosy. So far as the facts given are quoted, we may place reliance upon them; but apart from this we cannot feel that Mr. Tebb is to be trusted in the slightest degree, though we do not say that he would intentionally misrepresent. Some of the authenticated statements given show that leprosy is extending somewhat in Russia, and is not diminishing in Scandinavia. It is also said to be spreading in Spain and France. There are about 3,000 lepers in Egypt, and 8,000 (?) in Crete. In 1890 there were 700 lepers in Cape Colony, while India is supposed to have the enormous number of 250,000! There are about 1,800 lepers in the Sandwich Islands; leprosy is spreading throughout the Pacific, and is enormously prevalent in Japan, one hospital in Tokio having treated 4,249 cases in six years.

There are several hundred lepers in the West Indies, and several thousands in the northern parts of South America.

We will not try to follow Mr. Tebb's line of argument in showing that leprosy is due to vaccination. There are forms of foolishness that are not even interesting; and a study of this part of the book leads to trust that the recrudescence of leprosy may be soon followed by the passing of Mr. Tebbs.

THE SPELLING OF SYMPHYSEOTOMY.

Our esteemed and usually erudite contemporary, the *New York Medical Journal*, takes us to task for some remarks on the orthography of "symphyseotomy" in the following terms:

"Our esteemed contemporary, the Medical Record, criticises the author of the Academy of Medicine's announcement for allowing an author to use the word *symphysiotomy* instead of *symphyseotomy*. As the Record correctly remarks, the genitive of σύμφυσις is συμφύσεως, and it implies from that fact that the epsilon ought to be represented in an English derivative of the word. While we are not ready to say that *symphyseotomy* is not the preferable form of the word, we cannot admit the cogency of the Record's argument, for the epsilon is simply a part of the genitive termination, and not a part of the stem. Such Greek words in -ις take -ν in the accusative, for example; moreover, σύμφυσις is only a compound of φύσις, and must be as free as that word in the formation of further compounds; and, with such classical compounds of φύσις before us as φυσιολογία (and none that we can find in -εσ-), we are unable to see that *symphysiotomy* is inadmissible."

We will endeavor to enlighten our mystified contemporary. It is indisputably true that σύμφυσις is only a compound of φύσις, but it by no means follows that its further compounds must be formed after the model of the Ionic φυσιολογία. This compound was made at an early period, before the Attic dialect had given its stamp to the Greek language and when most writers, if writers there were at that time, employed the Ionic forms. Now the Ionic genitive of φύσις was φύσιος and the stem retained the iota in all the oblique cases, so naturally enough such words as φυσιολογία and φυσιολόγος were formed with an iota and not with an epsilon. But in classical Greek, we need hardly remind our scholarly contemporary, stems in iota, in words of this class, always change the iota into epsilon in the oblique cases, consequently epsilon becomes a part of the stem and is not simply, as the *Journal* incorrectly says, a part of the genitive termination. Had "physiology" therefore been coined in modern times it would undoubtedly have been spelled with an *e* instead of an *i*, for we do not now go back to Ionic forms in the construction of Greek neologisms.

So we repeat once more, symphyseotomy should be written with an *e*, and it is so written by nearly every lexicographer of note or otherwise, except a few compilers of medical dictionaries. But we shudder to think that, had it not been for our timely warning and this further explanation, a forthcoming volume of the most complete and most scholarly medical lexicon ever published might possibly have sanctioned the spelling of the word with an *i*. The consciousness of having, perhaps, averted such a calamity is to us an occasion of unalloyed satisfaction.

NATIVE AFRICAN CHILD-MARRIAGE AND UTERINE DISEASE.

In an article published in the *Journal of the American Medical Association* Dr. Nassau combats the common impression that maternity is easy among nations uncivilized and consequently untrammelled by the restrictions of fashion and conventionality. At any rate it does not apply to the tribes of Western Equatorial Africa. An acquaintance, based on a residence there of over thirty years, with native African customs and habits, has made it apparent to him that the sexual life of the native women is marred, maternity made painful and often fatal, and diseases entailed that make their lives a burden. He has observed the following facts, which are fruitful sources of uterine disease and difficult parturition.

1. Women are taken in marriage at too early an age. Sexual connection is commonly had before the age of puberty. Under the polygamous customs of the country, little girls, even in infancy, are bargained for with their parents by suitors, each running a race, trying who shall first complete the sum of money demanded by the parents as dowry. That sum given, the successful suitor has a right at once to take the child to his own village, and add her as "little wife" to his harem.

2. There is no compatibility of age or temper. The girl's consent was not asked while the money negotiations were being carried on for her—a child in her mother's

arms. There is no tender courtship, no gentle deference of a lover. Her owner's rôle is that of teacher or master, whose eye is always that of a jealous inspector. And the child responds with the trickery of a pupil, and the subterfuges of a slave. It is impossible that there should be conjugal affection or connubial happiness. Her own wishes and preferences are elsewhere. She clandestinely gratifies them. Her sexual life therefore really goes on under polyandry: the combined (enforced) association with her owner, the (preferred) association with her chosen secret lover, and the (required) connection with her owner's guests. This latter is a part of native African hospitality. The chief furnishes his guests (black and white) with food by day, and a bed and female companion at night. It is the custom of the country.

3. Even when the young wife has become pregnant, the chances are against her babe's safe delivery. The probabilities are large that there will be miscarriage.

4. It is true that the prospect of maternity is welcomed by the young wives; for the women all cherish their babes affectionately (that is the only lasting affection that enters their lives); and they are given by their owners better position, in recognition of their having increased his importance as a father. The prospect is welcomed also by the woman's female relatives; for they also are to share in the increased honor of the family. But their preparations for the event are wearying, harassing, and often injurious. The young expectant mother is vexed with innumerable superstitions and prohibitions of what she must not do or eat.

5. Actual parturition is met with very unskilful treatment, which often amounts to shockingly barbarous interference.

The author, who in addition to being a physician is also a missionary, observed the following pathological states as the most common results of African child-marriage: 1. Rupture in the genital region, either from the little mother's bodily structures being not fully developed, or from outside force used in aid of parturition. 2. Displacements of the uterus. 3. Sterility. 4. Ovarian tumors. 5. Uterine ulcers. 6. Dysmenorrhœa and menorrhagia. 7. Premature loss of good looks, and early appearance of haggard old age.

With such unimpeachable testimony before us, the civilized woman's lot in the matter of parturition can no longer be regarded as immeasurably inferior to that of her savage sister. It ought to be a comforting reflection to her that she does not after all pay so very dearly for some of the privileges of her station. A return to the "simple life" of primitive tribes need not therefore be preached at her by censorious moralists.

A Cheap Remedy for Dysentery.—Ipecac is the great remedy for dysentery in India. Dr. E. H. Thomas, of Nagina (*Indian Medical Record*), has found that parched grain powder (*Pulv. cicer. exsiccata*) acts equally well, and is a very cheap and effective remedy. It is given in doses of ten to twenty grains, three times a day. From Germany, on the other hand, comes this remedy: ℞. Solut. acid. boric., four per cent., 400.0; acid. tannic., 3.0; tinct. opii, ♏ xv. M. Sig.: Use one-fourth as an injection with warm water.

News of the Week.

Eleventh International Medical Congress.—The following is the preliminary programme of the Section on Military Medicine and Surgery:

"The Prevention of Tuberculosis in Armies." Discussion to be opened by a medical officer of the French army; C. Sforza, Professor of Military Hygiene at the Army Medical School, Florence. "On Gunshot Wounds Inflicted by the New Firearms and their Treatment in the Field." Discussion to be opened by a medical officer of the Austro-Hungaric Army; C. Pretti, Director of the Military Hospital, Verona. "Can Medical Reports and Statistics of all Armies be Compiled According to a Uniform Plan, so far at Least as the General Points are Concerned, so as to Facilitate the Comparison from a Scientific Point of View, of Statistics of Diseases, Wounds and Causes of Death in Peace and War." Discussion to be opened by the International Commission appointed by the Eighteenth Section of the last International Medical Congress held in Berlin, composed of the following gentlemen: Drs. Billings, of Washington, Chairman; Krocker, of Berlin; Notter, of Netley; and Schneider, of Paris. "On the Most Practical Measures for the Prevention of Infectious Diseases on Warships." Discussion to be opened by Professor Rouvier, of the French Navy; Drs. Bressanin and Cipollone, of the Italian Navy. "How best to Organize Medical Service in a Naval Action in Relation to the Construction of Modern Battleships and New Weapons." Discussion to be opened by a medical officer of the British navy; Dr. Pasquale, of the Italian Navy. "What Changes will the Adoption of New Firearms Introduce in the Organization of Transport and First Aid to the Wounded?" Discussion to be opened by Dr. Werner of the German army; Dr. Tosi, Director of the Army Medical School, Florence. The following papers have also been promised: "On Aseptic and Uniform Sterilized Dressings, by Dr. Habart, of Vienna (with demonstration); "On Abdominal Wounds Inflicted by Weapons of Small Calibre (6⅝ mm.), their Treatment (with demonstration)," by the same; "On Prevention of Tuberculosis in Warships," by Dr. Santini, of the Italian Navy; "The Illumination of the Battlefield," by Dr. Mendini; "On Immediate and Definitive Results Produced by Operative Treatment of Local Tuberculosis in the Army," by Dr. Randone; "On Gunshot Wounds Inflicted by the Bullet of the New Roumanian Rifles," by Dr. Demosthene, of Bucharest; "On the Question of Hernia in the Army," by the same; "On the Action of Projectiles of Small Calibre," by Dr. Kocher, of Berne.

Special correspondence concerning the Military Section should be sent to the secretary of the Organizing Committee of this section, Dr. Ridolfo Livi, capitano medico at the Ispettorato di sanita militare, ministero della guerra, Rome. All general communications should be addressed to the General Secretary, Professor Maragliano, at Genoa.

The Second Annual Dinner of the Alumni Association of the Presbyterian Hospital, New York, was held Thursday evening, May 11th, at Clark's, West Twenty-third Street, Dr. W. K. Simpson, President, presiding. Toasts were responded to by the following: Dr. W. Les-

ter Carr, President of Charity Hospital Alumni Association; Dr. G. C. Madill, Ogdensburg; Dr. C. S. Wagner, Superintendent Binghamton State Hospital; and Drs. D. B. Delavan, F. R. Savage, N. H. Porter, A. Freeman and D. Van D. Hedges, New York City; and Dr. J. W. Stickler, Orange, N. J. The following officers were elected for the ensuing year: *President*, Dr. W. K. Simpson; *Vice-President*, Dr. D. B. Delavan: *Secretary* and *Treasurer*, Dr. David Bovaird, jr.

Suggestions to Dairymen.—At the meeting of the Section on Pediatrics of the New York Academy of Medicine, May 11th, a resolution was adopted authorizing the chairman, Dr. Chapin, to appoint a committee to formulate rules suggestive to farmers and dairymen of the best manner for caring for milk intended for the city market.

Willard State Hospital, Willard, Seneca Lake, N.Y.—Dr. Theo. H. Kellogg has been appointed superintendent to succeed Dr. Pilgrim, resigned. The appointment is an eminently fitting one, as Dr. Kellogg brings to his new position a long, varied, and extensive experience with the insane, and an executive ability which will be favorably felt in the performance of his responsible duties.

The New Chief of the Medical and Surgical Bureau of the Navy.—As it is always interesting to know something concerning any medical man who has risen to high distinction by meritorious work, we present to our readers the following honorable record of the successful appointee to the highest position in the medical corps of the Navy. Surgeon-General J. Rufus Tryon was born in Coxsackie, Greene County, State of New York, September 24, 1837, and graduated at Union College, Schenectady, State of New York, in the class of 1858, receiving the degrees of A.B. and A.M. in course, afterward graduating from the Medical Department, University of Pennsylvania, March, 1861. He then pursued the study of medicine abroad, in Paris, France, until the fall of 1861, when he returned to the United States to enter the military service, and served during the War of the Rebellion. He was appointed Acting Assistant-Surgeon, U. S. Army, March, 1862, and served in that capacity until he passed the required examination for the position of Assistant-Surgeon, U. S. Navy, in which latter corps he was appointed as Acting Assistant-Surgeon, U. S. Navy, March, 1863; and commissioned as Assistant-Surgeon, U. S. Navy, September, 1863. He served until the close of the war, with Admiral Farragut, West Gulf Squadron. After the fight at Mobile Bay, August 4, 1864, had the wounded under his charge at Naval Hospital, Pensacola, Fla. He served after the war as follows: Naval Hospital, Boston, Mass., 1865–66. Detailed to make a special report for the department of the wounded treated in that hospital during the war. Was appointed Assistant, Bureau Medicine and Surgery, Navy Department, in 1866, by the late Hon. Gideon Welles, Secretary of the Navy, and served until 1870. During the whole time, duties most arduous. He became Passed Assistant-Surgeon, 1866; Surgeon, 1873; Medical Inspector, 1891. He had charge during that time of the temporary Small-pox Hospital at Yokohama, during the epidemic of that disease in 1871; and also appointed by Rear-Admiral John Rodgers, then in command of the station, to Superintend the building of the present U. S. Naval Hospital at Yokohama, Japan. He was assigned to special duty, New York, during the yellow fever epidemic, at the Navy Yard, Pensacola, Fla., 1873–76. The greatest heroism was shown by Medical Inspector Tryon, in 1874, by offering his services for the yellow fever epidemic at Pensacola, Fla., *vide* his report of epidemic of yellow fever at Navy Yard, Pensacola, Fla., during the summer and fall of 1874, on file in Navy Department and published in Sanitary and Medical Reports, 1873–74, Bureau of Medicine and Surgery. His subsequent assignments were: 1876–79, North Atlantic Station. 1879–82, Special duty, New York. 1882–83, "Alaska," Pacific Station, South Pacific Coast and Sandwich Islands, *vide* his report on leprosy, Hawaiian Islands, published in the *American Journal of the Medical Sciences*, Philadelphia, 1883. 1883–84, Member examining board; 1888, Marine rendezvous, New York. Delegate International Medical Congress at Copenhagen, Denmark, 1884. Afterward "Quinnebaug," European Station and African coast until 1887, *vide* his report on Health Exposition, London; International Medical Congress, Copenhagen, etc., on file in the Navy Department and published in report of Surgeon-General of the Navy, 1884. 1888–91, Special duty and member of Medical Examining Board. Received the honorary degree Ph.D., Union College, 1891. 1891–93, U. S. Flag Ship, Chicago, North Atlantic Station. Duty Montevideo, Uruguay, and La Guayra, Venezuela, vid. recent reports of services rendered wounded Venezuelan soldiers of both parties at Macuto, dated respectively October 7 and 25, 1892, on file in Navy Department. His report of the 7th instant bears the following indorsement of Rear-Admiral John G. Walker, Commander-in-Chief of N. A. Station:

La Guayra, Venezuela, October 7, 1892.

Respectfully forwarded for the information of the Navy Department. In forwarding this report I cannot commend too highly the conduct of Medical Inspector Tryon. His work has been hard, continuous, enthusiastic, and skilful. He has organized and conducted the work most creditably, and, while ably assisted by his subordinates, the success achieved has come from *his* professional ability and enthusiasm.

Very respectfully,

J. G. Walker,

Rear-Admiral U.S.N., Commanding U. S. Naval Force, North Atlantic Station.

Thus it will be seen that Medical Inspector J. Rufus Tryon, U.S.N., has served continuously for over thirty years in the Medical Corps of the United States Navy, and he has four years to serve on the Active List, for which time, according to the Bureau Organization of the Navy Department, such appointments are made and confirmed by the Senate of the United States.

The Appendix Pendulum is already beginning to swing the other way. A year or two ago some surgeons agreed that at the very first symptoms referable to the appendix, the abdomen should be opened. This is not the whole story. Individual cases must be studied each by itself, by the physician together with the surgeon. Here, as elsewhere, conservatism is worthy of, at least, consideration.

The Significance of a Reputation.—A member of the Yale crew was recently taken ill suddenly with abdominal pain, vomiting, and other symptoms referable to the

appendix vermiformis. A New York surgeon who had written much regarding that small but important portion of the body was summoned. As the consultant left the room the student asked his name. "That," said the nurse, "is Dr. X——." "Good Lord!" said the young man, "then I must have appendicitis." His diagnosis was correct.

The Eighth Annual Dinner of the Hospital Graduates' Club was held May 18th, at Hotel Hungaria. President N. H. Henry acted as toast master. The following gentlemen responded to the impromptu invitations: Drs. R. W. Amidon, W. K. Simpson, J. S. Hanley, George F. Shrady, A. L. Ranney, Frank W. Jackson, and C. W. Cutler. Letters of regret regarding unavoidable absence were read from Dr. T. Gaillard Thomas and Allan McL. Hamilton.

Mount Sinai Hospital.—Dr. F. S. Mandelbaum has been appointed as Assistant Pathologist to the Mount Sinai Hospital.

American Surgical Association.—The next annual meeting is to be held in the new Alumni Hall of the Medical Department of the University of Buffalo, 20 High Street, Buffalo, N. Y., May 30, 31, June 1, 1893.

American Medical Editors' Association.—The following programme has been arranged for the eleventh annual meeting of this Association, to be held at Milwaukee, Wis., June 5, 1893. The general business meeting will be held at 4 P.M. The President, Dr. Culbertson, will deliver an address. Dr. Gould will read a paper on "Medical Orthography." This will be followed by a paper on "Some New Phases of Journalism," and a discussion. Reports of committees and election of officers and other business will conclude the session. The banquet will be given at 6.30 P.M., and be followed at 8.30 by the annual address, by Dr. Ernst Hart, Editor of the *British Medical Journal*. This will be followed by an address on "Editorial Responsibility and Questions of Libel," by the Hon. Clark Bell, Editor of the *Medico-Legal Journal*, and President of the International Medico-Legal Congress. Dr. J. Stanly Hall, Editor of the *Psychological Journal*, and President of Clark University, will address the Association on "Psychological Phases of Medical Study and Journalism." Discussion and remarks will follow.

New York Post-Graduate Medical School.—At a meeting of the Board of Directors held May 17, 1893, A. Palmer Dudley, M.D., was elected Professor of Diseases of Women. George M. Edebohls, M.D., Professor of Diseases of Women, and George T. Elliot, M.D., Professor of Diseases of the Skin. J. West Roosevelt, M.D., has resigned his position as Professor of Clinical Medicine.

Professor Amaldo Cantani died suddenly on April 29th, the day on which was to be celebrated the twenty-fifth anniversary of his assumption of the chair of clinical medicine in the University of Naples. He was born in Hainsbach, of Neapolitan parents, on February 15, 1837. He studied medicine in Prague, where he received his doctorate in 1860. He was for a time assistant to Jaksch, but was called in 1864 by the Italian Government to the chair of materia medica in the University of Pavia. In 1867 he was chosen professor of clinical medicine in the Ospedale Maggiore of Milan, and on April 29, 1868, was called to the University of Naples, where he remained up to the day of his death. He was offered the chair of clinical medicine in Vienna, rendered vacant by the death of Bamberger, but preferred to remain in Naples. For two years he had been suffering from a chronic ailment which prevented him from carrying on his professional duties, but his death was not looked for so soon.

The Czar of Russia is said to have carcinoma.

Death of Professor Schnitzler.—We regret to hear of the death of Professor Schnitzler, of Vienna, one of the foremost of modern laryngologists, who had done much to advance the science of the subject to which he had devoted his life. He was founder of the *Wiener Medicinische Presse*, and of a medical school extra-mural to the University, in which he never became a professor.

Cerebro-spinal Meningitis is said to be very prevalent in this city. There were 28 deaths from it in the week ending May 13th. The disease was last epidemic in this city in 1881, when 461 persons died of it. The previous epidemic of 1872 was more fatal, however, there being 782 deaths.

Kitasato Improves on Tuberculin.—The daily press, a somewhat uncertain authority, gives currency to the news that Dr. Kitasato, of Tokio, has actually succeeded in curing consumption in advanced stages by means of some new applications of Koch's remedies. The government has granted $45,000 to Dr. Kitasato for this year, and $15,000 for each of the next two years, to prosecute the study and treatment of cholera, abdominal typhus, diphtheria, and consumption. During the last winter, Dr. Kitasato has accomplished some remarkable results with consumption. Four out of five patients who had been treated two months were discharged cured, and one hundred and twenty-five who had been in hospital only a few weeks showed marked improvement. None of the patients had passed beyond the second stage, nor had cavities formed in their lungs; but all were emaciated and had night sweats, and several coughed sixty grammes of sputum daily. One had been in bed six weeks before being treated. All showed signs of marked improvement within a month. The sputum decreased and there was gain in flesh. The treatment is a modification of Koch's. A preparation of tuberculin is injected under the skin and taken into the blood. Its effect is to give immunity to healthy lung tissue, and thus enable the diseased portions to recover health. The most noticeable effect of Dr. Kitasato's method is the absence of reactionary fevers, which have followed the use of tuberculin in Germany. In only one case did this fever occur, and then but once. We do not see that Kitasato has done any more than others who have used modifications of the tuberculin.

A Bacteriological Institute has been established at Bremen, of which Dr. Kurth has been appointed Director by the Imperial Health Office.

The Annual Meeting of the German Congress of Internal Medicine will be held next year at Munich, under the presidency of Professor Quincke, of Kiel.

An Anglo-American Hospital at Rio Janeiro.—The want of a hospital for English-speaking patients, which has been long felt in Rio Janeiro, has been filled by the recent opening of such an institution, which will contain, when all the arrangements are complete, thirty-five beds.

The site and the extensive alterations in the buildings thereon have been defrayed by the subscriptions, amounting altogether to $210,000, of the English and American colonies.

Professor Erb, of Heidelberg, who was selected by the Professorial College of the University of Vienna to succeed the late Professor Kahler, has declined the appointment.

The Late Dr. Charles Carroll Lee.—At the last meeting of the Medical Society of the County of New York the following preamble and resolutions were unanimously adopted:

Whereas, It has pleased Divine Providence, in its inscrutable wisdom, to take from us, in the prime of his manhood and the fulness of his usefulness, our colleague, the President of this Society; and whereas we, the Officers and Fellows of the Medical Society of the County of New York, desire to place upon record our estimate of the character of our deceased brother, be it

Resolved, That in the death of Charles Carroll Lee, this Society has lost a devoted, able, and faithful officer, whose earnestness of purpose and loftiness of motive peculiarly fitted him for the office which he adorned.

Resolved, That the loss which we thus mourn is by no means limited to our Society, our city, or even our country. Wherever the profession of medicine is to-day practised as a science, there will the death of Lee be recognized as a misfortune; there will the silence of his voice and the stillness of his pen arouse a sorrow responsive to our own.

Resolved, That to his family, in this bitter hour of bereavement and sorrow, we most respectfully and sincerely extend our heartfelt sympathy, wishing for them that consolation which is the legitimate outcome of the contemplation of his noble life and the bright record which he leaves behind him.

Resolved, That a draft of these resolutions be spread upon the minutes of this Society; that duplicates be sent to the medical and daily press of this city; and that a copy be transmitted to the family of our deceased friend.

Cure of Aneurism by Bacelli's Method.—Pritchard reports a case of Bourget, at Lausanne, Switzerland, in which an aneurism of the descending aorta was treated by this method. It had passed by pressure-absorption the body of a vertebra and two ribs, and formed a tumor between the spine and the scapula. A watch-spring 2 mm. broad and 37 ctm. long, with a spiral 5 ctm. in diameter, after being boiled in hydrochloric acid (to sterilize it and to form a film of ferric chloride to start the coagulation process) was introduced through a small slit into the sac. The slit was then closed. The subjective symptoms were relieved. One month later the tumor was found by exploratory puncture to contain no blood, and the pulsations had decreased in extent and intensity. Improvement at time of report was steadily progressing.

The Cincinnati Academy of Medicine has added some much needed new life by absorbing the Cincinnati Medical Society. Although the last-named society gave up its name, officers, and bank account, it seems to take the lead in the united society. The Academy has been making an effort to procure for itself a home which it could call its own. Negotiations are in progress which have not yet been completed. The newly elected officers of the Academy are Dr. C. G. Comegys, *President;* Dr. E. G. Zinke and E. S. Stevens, *Vice-presidents;* Dr. David DeBeck, *Secretary;* Dr. George E. Jones, *Treasurer;* Drs. T. A. Reamy, John A. Murphy, and N. P. Dandridge, *Trustees*.

Another Medical College.—An act has been passed to incorporate a medical college in the city of Charlotte, N. C., with no powers to graduate; giving the right to bring bodies and dissect unknown and unclaimed bodies.

Dr. Charles K. Mills has been elected Professor of Mental Diseases and of Medical Jurisprudence in the University of Pennsylvania, in the Medical Department, where he has been a lecturer on mental diseases for many years.

Cincinnati Graduates.—The college season has just about closed for Cincinnati. The returns are as follows: The Medical College of Ohio leads with 61; Miami, 28; Eclectic, 26; Veterinary, 22; Pharmacy, 18; Cincinnati, 13; Homœopath, 12; Cincinnati Dental, 5; Ohio Dental, 15; Presbyterian Woman's, 3; Cincinnati Woman's, 3. Total, 206. Just enough for one first-class college.

Not a Delusion.—Our esteemed contemporary, *The Medical News*, thinks that Mr. Stead has a delusion because he believes in the fourth dimension in space. Our contemporary may be right in fact, but he is wrong in his premise. The fourth dimension of space exists in fact to mathematicians, who have built upon it a system by which practical and non-transcendental conclusions are reached.

Raising the Fees.—A number of Toledo's prominent physicians held an informal meeting last week to discuss the advisability of increasing the price of visits to $2, and to make a rate of from $5 to $10 for administering anæsthetics. Keep it up, both the movement and the price.

New York Cancer Hospital.—Dr. Arthur L. Fisk has been appointed an Assistant Surgeon at the New York Cancer Hospital.

Dr. Dujardin-Beaumetz's Treatment of Obesity.—"For the treatment of obesity in a person whose heart and arteries are sound," says *The Lancet's* Paris correspondent, "the above-named physician recommends the following method: Every morning a general body-sponging with hot *eau de Cologne* and water, followed by dry rubbing and massage. A tumblerful of purgative water is then administered. At the end of each meal a dessertspoonful of the following solution is swallowed: Fifteen grammes of iodide of potassium and 250 grammes of water. The undermentioned regimen is to be rigorously observed: First meal at 8 A.M., a cup of chocolate and 20 grammes of bread. Second meal, 2 eggs or 100 grammes of meat; 100 grammes of green vegetables or salad; 15 grammes of cheese, a little fruit, 50 grammes of bread, a glass and a half of liquid (a light white wine with Vichy water). Third meal at 7 P.M., no soup, 100 grammes of meat, 100 grammes of green vegetables or salad, 15 grammes of cheese, fruit, 50 grammes of bread, a glass and a half of liquid (white wine with Vichy water). No drinking between meals, no tea, coffee, cognac, or other alcoholic beverage. Plenty of exercise in the open air.

Obituary.

CALEB GREEN, A.M., M.D.,

NEW YORK.

Dr. Caleb Green died at his residence, Homer, Cortland County, N. Y., May 10, 1893, in the seventy-fourth year of his age. Dr. Green was born in Lafayette, Onondaga County, November 14, 1819. He spent his early life on a farm, attended the public school and the Cortland Academy. He began the study of medicine in his native village, but subsequently became a pupil of Dr. Frank H. Hamilton, then Professor of Surgery in the Geneva Medical College, from which institution he graduated in 1844. He settled in Homer, where he remained until his death. He married Miss Roxanna R. Parsons, a teacher in Mount Holyoke Seminary, Mass., a lady of great intelligence and of a most excellent Christian character. They had three children, two of whom died in infancy; the third is Dr. Frank Hamilton Green, of Homer. Mrs. Green died in 1885. Dr. Green was an enthusiastic student of his profession and of the whole range of the natural sciences. He was always well informed in every branch of the medical sciences, and his opinion in doubtful cases was widely sought by physicians. In botany, geology, entomology, and pharmacology he was especially proficient. He wrote little for publication, but the papers which have appeared from his pen are characterized by great clearness and force. While an undergraduate he published an article on the "Epidemic Influenza of 1843," which he had studied clinically, in the *Boston Medical and Surgical Journal*, and in the same journal appeared his thesis, "On the Functions of the Oblique Muscle of the Eye." The latter paper was based on original investigations and attracted much attention. Dr. Green was twice President of the County Medical Society, and for many years Recording Secretary of the State Medical Association. From 1855 to 1858 he was Professor of Materia Medica and General Pathology in Geneva Medical College, and from 1858 to 1862, Professor of Physiology and Pathology in the same institution. On the organization of the University of Syracuse he was offered a chair in its medical department, but he declined, as his practice required his entire attention. Dr. Green was in all respects a model country physician. While thoroughly devoted to his profession, his large and liberal mind made him one of the most useful citizens of the county. He was fully informed on all public questions, and took an active interest in all civil, municipal, moral, and religious subjects which affected the well-being of the people. The influence of the well-ordered lives of Dr. and Mrs. Green will long remain a fruitful blessing to the community in which they resided.

SAMUEL N. BRAYTON, M.D.,

[BUFFALO, N. Y.

Dr. Samuel N. Brayton, one of Buffalo's best known physicians, died on May 17th. He was afflicted with gangrene of the foot, and it was found necessary to amputate the leg. Death resulted from the shock. Dr. Brayton was born June 11, 1839. He graduated from the College of Physicians and Surgeons of the medical department of Columbia College, New York, in 1861. In the latter part of the same year he was assistant surgeon in the Boston Navy Yard, and afterward transferred to the frigate Sabine, and later to the ironclad Montauk, and went through some of the most severe naval engagements of the war. He went to Buffalo early in the '70's. He was one of the incorporators of the Buffalo College of Physicians and Surgeons, and for years had been dean of the college.

Correspondence.

A GOOD WORD FOR THE MEDICAL CORPS OF THE ARMY—A REPLY TO "THE OTHER SIDE."

To the Editor of the Medical Record.

Sir: Loath as I am to rush into public print, I cannot let pass unnoticed and uncorrected the crude dissertation appearing in your issue of May 20th, signed, "The Other Side." Your correspondent endeavors to suggest to the medical fraternity the character of person he considers fitted for appointment as surgeon-general of the army or navy. As is usual with meddlers in affairs which cannot greatly concern themselves, he displays an ignorance of conditions upon which he wisely dilates, and his article perhaps deserves no notice from one interested in the Medical Corps of the Army. As your journal, however, passes under the eyes of thousands of intelligent medical men, any possible acceptance of your contributor's statements should be thwarted. The Medical Corps of the Army or Navy needs no champion. The composition of its material is too well known to intelligent physicians in this and other countries.

It is, however, very kind of your contributor to inform the medical profession that the army has brought forth such minds as Billings, Sternberg, Woodward, and Otis, "two of whom have died with a fair amount of scientific and literary labor to their credit" as he generously concedes, and with them his list of "laborers in the vineyards" of scientific work ceases. I would politely refer "The Other Side." to the "Medical and Surgical History of the War of the Rebellion," in which he will discover most interesting descriptions of work performed by numbers of gallant, painstaking, patriotic, and brilliant servants of the Government; men who sought not publicity in print for recognition, but in their peculiar way accomplished results which are to-day recognized by the greatest military surgeons of the world, and for which the soldier of this day can be profoundly thankful. And many of these men are now on the active and retired list of the army. The medical officer of the army and navy has peculiar and trying duties to perform, which may not bring him much before the public gaze; nor is it possible for one unfamiliar with the services to express an opinion as to their needs. Knowledge of scientific medicine is not the only prerequisite for the administration of a corps of one hundred and ninety men. Experience, tact, a knowledge of human nature, a strong sense of justice, and fearlessness of purpose are also demanded, and constant contact with troops in their varying conditions does much to inculcate these principles. Perhaps, therefore, your contributor can see some logic in long and arduous service as a claim to consideration in such appointments.

The general tone of his letter is an insult to many faithful veterans of the Republic, who in time of their country's need, whether in the late war, dangerous Indian campaigns, or at desolate and remote stations have unmurmuringly been true to their charge. The caustic reference to "drones" and old "dry as dust" as possible components of the services is neither witty nor worthy of notice.

It is, however, Mr. Editor, simply to demonstrate to your readers that the opinions "The Other Side" expresses in his magnanimous review of our corps are the result of sheer ignorance, that I have condescended to make this response—not defence, for we need none against such assailants. In conclusion, I would also suggest that your contributor review his knowledge of "English Composition," before passing an opinion upon the subject he so wisely discusses.

Yours truly,

N. S. Jarvis, M.D.,

Captain and Assistant-Surgeon U. S. Army.

Davids Island, New York Harbor, N. Y.,
May 22, 1893.

Society Reports.

AMERICAN GYNECOLOGICAL SOCIETY.

Eighteenth Annual Meeting, Held at Philadelphia, Pa., May 16, 17 and 18, 1893.

THEOPHILUS PARVIN, M.D., PRESIDENT, IN THE CHAIR.

THE PRESIDENT made a few remarks, welcoming the members to Philadelphia.

Congenital Dilatation of the Urethra.—DR. WILLIAM H. BAKER, of Boston, read the first paper. In it he reported a case of congenital dilatation of the urethra, the only one in which an operation was performed of three which had come under his observation. A diagnosis of congenital dilatation was important, as the cause had sometimes been erroneously assigned to forcible coition or bad practice by the patient. The condition resulted from arrest of development at the fourth or fifth month. The urethra readily admitted the little finger, was shortened one-third or one-half, there was no well-marked vesical neck, there was urinary incontinence. The urethra was drawn farther under the symphysis than natural, was patulous, livid. The urethro-vaginal septum was very thin. It was hard to say where the urethra ended and the bladder began. He operated in the one case twice, a few months apart. He first attempted to close in the meatus urinarius by lifting the lower border of the hymen over the lower border of the meatus after the necessary denudation. This enabled the patient to hold her urine pretty well, except when jolted. At the second operation he narrowed the urethral canal by cutting out a strip three-eighths by one-inch from the urethro-vaginal septum, the upper part of the incision involving the vesical neck. The edges were then brought into apposition. Union was complete and the patient subsequently had pefect control.

Abdomino-Pelvic Fistula after Cœliotomy and Laparotomy; Its Prevention and Treatment.—DR. PAUL F. MUNDÉ read a paper on this subject. As a rule when the abdominal cavity had been opened the wound healed entirely, but in a certain number of cases after an apparently perfect union, at the time of or soon after removal of the sutures a discharge of pus took place at some portion of the wound, and on examination with the probe more or less undermining of the skin or downward burrowing of pus was found. If the ligatures and pedicles had been safely dropped and the abdominal incision carefully closed, such a mural abscess extended only to the entirely closed peritoneum and did not dip down into the pelvic cavity, and was easily healed by splitting open the covering of the fistulous track, packing it with gauze, etc. But in a certain number of cases the fistula was found to extend down into the pelvic cavity, even to the bottom of Douglas' pouch, the abdomen being shut off by adhesions.

The causes of deep sinuses were various. A common cause was undoubtedly the infectious character of the contents of the organs removed. The use of a drainage-tube, in his opinion, decidedly favored the formation of an abdominal fistula, another cause was the use of silk or other imperishable suture material. Forceps, sponges, or other foreign body had occasionally been left in by accident and caused a sinus. A fistula was likely to result after the extra-peritoneal treatment of the stump in hysterectomy. Abdominal sinuses were apt to remain after the evacuation, spontaneous or surgical, of abscesses originating in the abdominal and pelvic cavity and pointing to the side of the median line. In some cases the abscess, be it intra- or extra-peritoneal, might point in another direction than the lower lateral abdominal wall or the inguinal canal.

Other factors which tended to produce and maintain the fistulæ were, (1) the firm, unyielding character of the walls of the abscess, which showed an invincible tendency to soft, friable, pouting granulation secreting serous pus; (2) the depth of the sinus; (3) the anatomical situation of the abscess preventing application of peripheral compression; (4) such patients were usually much run down by long preceding illness. The prognosis of such fistulæ depended upon their duration and the condition of the patient. In treatment the first object was to discover and remove the cause. Seek to remove remaining suture material or other foreign substance, but one should remember the hard substance belt might be merely cicatricial tissue, pulling upon which might do injury by tearing the wall of the sinus. In one such instance he tore into the peritoneal cavity, but the patient recovered. Scrape away granulations with the sharp curette and irrigate the canal with 1 to 1,500 bichloride, and pack lightly with gauze. Some cures had been effected by touching the length of the sinus with nitrate of silver. Other means failing, surgical procedures would be indicated; two courses lying open, neither quite sure nor entirely safe. The first was to drain through into the vagina if the sinus were deep enough to allow the sound to be felt by the finger in the vagina. The drainage-tube should be long enough to protrude from the vagina. The second course was to enlarge the wound down to the bottom of the sinus and treat it like any other open wound, by irrigation and wet gauze packing. There might be danger of cutting into the bladder, rectum, peritoneal cavity, or large vessels. One might finally be compelled to make intra-peritoneal exploration. Where the general health was good, it was at times better to advise the patient to let well enough alone.

Dr. Mundé's paper was discussed by Drs. Goodell, Noble, Currier, A. Palmer Dudley, Edebohls, Cleveland, and the author.

Puerperal Eclampsia; the Experience of the Boston Lying-in Hospital During Eight Years.—DR. CHARLES M. GREEN read the paper. The number of cases at the hospital the past eight years was 36; 27 of the mothers were discharged well, 9 died, a maternal mortality of twenty-five per cent. In ascertaining the fœtal mortality, if only the ante-partum and inter-partum cases were considered it appeared that of 21 viable and non-viable infants 11 were lost; if the post-partum cases were grouped with them there was a fœtal loss from all causes of 13 in 38 (two cases were twins); but if only the viable children were considered the fœtal loss was 5 in 28, a mortality of eighteen per cent. The 27 mothers recovered from one to twenty-five convulsions. The prognosis in any given case seemed to depend more upon the time when the convulsions occurred, their severity and frequency, length of the labor, depth of the coma, and degree of kidney insufficiency than upon the number of convulsions.

Of 10 ante-partum and inter-partum cases in which the child was viable 8 children were born living, after an average of 3.9 maternal convulsions, and two dead after an average of 5.5 convulsions. One child survived 17 maternal convulsions. It appeared that the fœtal prognosis depended upon the frequency, duration, and severity, rather than upon the number of the maternal convulsions. If the experience of the hospital taught nothing else it surely pointed to the desirability of preventing or adequately ameliorating the condition which, if unchecked, often culminated in the eclamptic seizure. If the prodromal symptoms of headache, œdema, etc., were recognized and treated, puerperal convulsions would occur much less frequently.

Treatment.—In treatment, ether was used at the appearance of the first symptoms of an attack, believing it was at least as safe as chloroform; chloral hydrate per rectum, as a nerve sedative between the attacks. Morphine was not approved. To excite the action of the skin they used the hot bath, hot air bath, pilocarpin (1/6 grain) guarded by brandy to avoid undue depression. Unless the skin responded promptly the eliminative action of the bowels was provoked by elaterium or croton oil, aided, if necessary, by enemata, milk, brandy, cream of tartar, water (3 iv. to pint), digitalis, acetate of potash. Venesection had not been employed but might be

indicated. In severe cases induced labor, manual dilatation, podalic version.

Septicæmia and its Treatment with Oxygen.—Dr. Andrew F. Currier read the paper. The microbes which were to be found in cases of septicæmia were the streptococci and staphylococci, together with their soluble products. In the cases of so-called mixed infection other microbes were also found. Much attention had been paid the past year to the bacterium coli commune which was ordinarily a harmless inhabitant of the intestine but became pathogenic in the presence of decomposing matter in the intestine, as in cases of prolonged constipation. The forms of septicæmia with which one necessarily became acquainted in the practice of gynecology and obstetrics might be the result of, 1, decomposition of retained material in the intestines, with absorption of toxic products resulting therefrom; 2, absorption of retained and decomposed material following abortion or labor at term through the uterine lymphatics or any divided portion of the uterine mucous membrane; 3, intoxication associated with surgical procedures upon abdominal and pelvic organs. The third form was usually attributed to some conscious or unconscious fault on the part of the surgeon; to dirty hands, or dirty instruments; to the direct introduction of poisonous germs. This the author regarded as but half the truth, for it was known that a relatively clean operation in tissues that were unusually sensitive might result seriously. The individual equation eluded all attempts at antisepsis or asepsis. An antiseptic might be an irritant and provoke in sensitive tissues trouble which the laboratory experiment taught that it would prevent. The scrubbing-brush might be used so vigorously that the protecting epidermis would be removed and infection invited. The bruising and tearing of tissues, their prolonged pressure or exposure, and the various faults in the use of ligatures were quite as influential in the production of septicæmia as the introduction of a few germs which it was the business of the blood-cells, and particularly of the peritoneum to dispose of.

The symptoms which more than any others marked the presence of septicæmia and demonstrated the pernicious effect of the toxic agent were referable to the nervous system. Such were paralysis of the muscular coat of the intestine, uncontrollable vomiting, obtuseness of the intellect, etc. Coincident therewith there might be the greatest activity of the eliminative organs, as if nature were making frantic efforts to get rid of the accumulating load.

Treatment.—The object of treatment in cases in which the blood contained such toxic elements was twofold—to sustain the natural forces so that in the struggle which we were told the healthy elements of the blood were constantly waging against the toxic, the former might be victorious, and in addition to use, if possible, such means as would directly destroy or neutralize the effect of the toxic elements.

The natural forces were to be sustained by concentrated food, especially milk, and alcohol. The author then dwelt upon the value of oxygen, which was further shown clinically in the much greater proportion of recoveries in pavilions, etc., where plenty of air was possible. Dr. Welch had written him: "The question is a complex one, but I do not think you would be warranted in believing that the good results of your treatment (by oxygen) are attributable directly to a germicidal influence of the oxygen on the bacteria themselves." Stimulation of the nerve-centres presiding over functional activity was apparently the effect of the oxygen, and this, if sufficiently continuous, would produce a favorable result whether there was a direct germicidal action upon bacteria in the blood or not.

The President's Annual Address.—Dr. Parvin, in his annual address, read Tuesday evening, referred feelingly to the death of ex-presidents and members, and touched upon the distinguished labors of some.

Believing it was the duty of the president to offer advice and criticisms concerning the interests of the society he would try to speak truth regardless of policy. By an appeal to etymology he wished to rescue gynecology from its narrow use, vindicating the selection of the term gynecological as the name of the society, and bringing in clearer relief its purpose—obstetrics and the prevention and treatment of diseases of women.

Dr. Sims had prophetically said: "It is not to be denied that there is a very large element of discontent among men who are our equals in everything, and who might be organized into a formidable rival national association." A new association had been organized and had done very creditable work. The country was too large, the number of the profession too great for the amalgamation of the two organizations, and he did not believe in divided allegiance, membership in both societies. There were now twelve vacancies in the Gynecological Society, and he thought all should not be filled in one year. The best men should be elected; yet, other things being equal, he would choose a man from Texas rather than one from New York, one from Indiana rather than one from Pennsylvania, for the East already had more than two-thirds the membership. It was called the American Gynecological Society, yet there was but one member outside the United States, which was wrong.

A friend had refused to send a contribution, remarking, "There are too many societies and too many papers," words which should be carefully pondered. The president suggested that, while papers which had been read here were usually excellent, yet in the Transactions they should often be boiled down, and he suggested the secretary and a committee should have power to do this and decide as to the disposition of papers. He thought a few topics should be selected as the chief ones for discussion at each annual meeting, say four, two obstetrical and two gynecological. In referring to how gynecology and obstetrics should be taught in the schools, the speaker favored the custom prevailing in Europe, where the teacher was an obstetrician, and appended to his paper a reply from his friend, Professor Winckel, giving the reasons for the custom. Dr. Parvin thought it absurd to try to separate the duties of the obstetrician and gynecologist; one must be both. Again, he said, it was useless to deny that unnecessary operations, sometimes sexual mutilations, were done; some were so blinded with their successful surgery as to be unwilling to admit that they ever committed such a fault. Preventive medicine was the battle-cry of the day. Let it be still further applied in preventing puerperal sepsis, and one of the chief sources of operative measures would cease. Another field for prophylaxis involved a question of morals. He alluded to the social evil, with all its attendant physical ailments, and impressed earnestly the duty of physicians in checking it.

A Further Report upon Supra-vaginal Hysterectomy by the New Method.—Dr. B. F. Baer, of Philadelphia, gave the results of experience during the past year with supra-vaginal hysterectomy for fibroids, leaving the neck of the uterus as a stump, which, however, was extra-peritoneal, his method having been described by him in a paper at the last annual meeting, when he reported ten cases, with one death. The method differed only in technique from that previously practised by Dr. Goffe and Dr. Dudley. This year he had operated upon eighteen cases, with one death. This one patient died, not from the operation, but from suppression of urine, the kidneys being diseased. Such results were much superior to other methods.

By referring to Dr. Baer's previous article it will be seen that he covers the stump of cervix by the peritoneal flaps, or rather, as a rule, these, by their own elasticity, after ligation of the uterine arteries, close in over the stump and shut it off from the free peritoneal cavity.

The Development of the Intra-pelvic Treatment of the Stump after Hysterectomy for Fibroid Tumors and its Present Status.—Dr. J. Riddle Goffe, of New York, read a paper on this subject. He said the first

man to do a hysterectomy for a previously diagnosticated fibroid tumor was Dr. Kimball, of Lowell, 1855. Koeberle and Pean, French surgeons, had the honor of establishing the operation upon a scientific basis. They used the clamp and metallic loop, and fastened the stump into the abdominal wound. Since their time efforts had been constantly made to devise some means of dropping the stump into the pelvis, as in treating the stump of an ovarian cyst, and to-day the operation had become so well established that it was only the question of details that received consideration. It was no longer a question whether one should use the extra-peritoneal method or the intra-peritoneal method, but whether the cervix should be left or be removed.

Carl Schroeder's method was characterized by ligation of the broad ligaments and suturing the stump by superimposed catgut sutures. These sutures were not sufficient to control blood-supply, and he lost his cases by secondary oozing and infection. Martin, Bernecke, and Zweifle continued to use this method with modifications, with varying success; the latter having reduced the mortality from thirty to ten per cent., he then abandoned the continuous chain suture.

From 1888 to 1890, Dr. Goffe, with the association and assistance of Dr. A. P. Dudley, devised a method of disposing of the pedicle the peculiar features of which were: 1. The large, distinct peritoneal flaps with which the stump and all traumatic tissues were buried beneath the peritoneal cavity; 2, transfixion of the stump inside these flaps; 3, utilizing, when necessary, the cervix as a drainage-tube. Dr. Goffe had operated upon six cases, with one death, and altogether there had been fourteen cases, with two deaths. Dr. Haywood Smith, of London, and Dr. Milton, of Egypt, had modified the operation by transferring the ligature on the pedicle to the uterine artery in the broad ligament, and had reported seven cases, all successful. By this modification, the method of controlling hemorrhage conformed to that of total extirpation, suppuration was avoided, and the operation seemed truly ideal. In 1891 Zweifle had reported a series of 51 cases, with two deaths, by a method which corresponded, in all essentials, to Dr. Goffe's, thus obtaining a mortality of only four per cent., which was the best record made by any operator by any method, and put the operation on a par with the success of ovariotomy. Mention was made of total extirpation in two steps as practised by Martin and Chroback, and in one step as practised by Polk and Krug.

Dangers and Complications of Uterine Fibroids.—Dr. S. C. Gordon, of Portland, Maine, read this paper, taking the ground that any woman having a uterine fibroid, however small, which caused enough suffering to drive the patient to the physician for relief, ought to be submitted to hysterectomy. Such tumors were not, as some seemed to think, inoffensive masses. They might go on to result in very serious conditions and jeopardize the life of the patient, as well as cause much suffering. He claimed that hysterectomy in such cases, if done early, had come to have about as small a mortality as ovariotomy. It was better to remove the uterus and appendages than to do partial operations and thus avoid possible further trouble, as malignant change, etc.

The Operative Treatment of Fibroid Tumors of the Uterus.—Dr. M. D. Mann, of Buffalo, read a paper on this subject. The papers read by Polk and Baer at the last annual meeting had attracted much attention, he said, and had turned the current of management of the pedicle from the clamp method to some internal method. The author gave his own experience with the supra-vaginal method. The entire number of cases had been 64. Oöphorectomy, 9, with 1 death; myotomy, 17, with 1 death; supra-vaginal hysterectomy (clamp), 21, with 2 deaths; abdominal hysterectomy (Polk's method), 15, with 1 death; supra-vaginal hysterectomy without ligature of the cervix (Baer's method), 2, with 2 deaths.

Regarding oöphorectomy for uterine fibroids, he thought the operation had a field, but a limited one. He would limit it to those cases in which a small fibroid was associated with disease of the tubes and ovaries.

His results with the clamp method in supra vaginal hysterectomy had been in the main satisfactory. But even though the results obtained by this method were good, it had, to his mind, many objections, such as the difficulty of obtaining a pedicle, of managing the peritoneum around the stump, great prolongation of convalescence, sloughing of the pedicle, pain.

The operation of hysterectomy by Polk's method left little to be desired. The rapid convalescence was remarkable. The case which he lost was a large, soft, sloughing fibroid, weighing twenty pounds.

Drainage was not employed, but since then he had used it in all cases. Ordinarily, however, he used the drainage-tube but little. He was utterly at a loss to explain the deaths in the two cases operated upon by the Baer method.

One of the most marked effects of improved methods had been extension of indications of the operation.

Operations upon the Uterine Appendages with a View to Preserving their Functions of Menstruation and Ovulation.—Dr. W. M. Polk, of New York, read a paper in which he drew the following conclusions: 1. In cases of chronic disease of the appendages the incisions should be in the nature of "exploratory incisions." 2. The question of removal should be in the main left for determination after the organs have been exposed. 3. That the condition of the ovary should be the chief factor in determining the question of procedure. 4. That, if need be, this may be determined by exploratory incision of the ovary or puncture. 5. That if the ovary contains pus, it and the associated tube should be removed, it being the rule that whenever an ovary is removed the tube must accompany it. 6. That if the tube contains pus, the ovary being free from pus or disseminated cystic degeneration, the operator is at liberty to recommend either the removal of both organs or else the partial amputation of the tube, leaving the ovary; and that the same rule apply in cases of hydro-salpinx and hemato-salpinx. 7. That cysts of the ovary do not indicate removal, provided they are not general throughout the organ and can be enucleated — hematoma of the ovary a possible exception. 8. Tubes with open infundibula, even though adherent and affected with parenchymatous inflammation and endosalpingitis, do not demand removal, excepting when one opens into a pus-cavity. 9. A tube whose outer end is closed may be opened, cleansed, and its inner and outer coats coaptated, and then be returned to the abdominal cavity, provided it does not contain pus and possibly old blood. 10. Adhesions do not demand the removal of the tubes and ovaries, unless they be so dense that in breaking them up the appendages are seriously injured. This presupposes that the appendages in themselves are not sufficiently diseased to demand removal.

The histories of a few out of eighty-four cases operated upon with a view to preserving the functions of menstruation and ovulation were read, and the fact that these functions had been preserved was fully proven by the occurrence of pregnancy in some.

A Case of Inversion of the Uterus.—Dr. Edward P. Davis, of Philadelphia, related a case of inversion of the uterus, and briefly considered questions of causation, treatment, etc., as related to the general subject. In the present instance there was no fibroid or other tumor, the pelvis was about normal and in normal proportion to the child. Neither ergot nor strychnine had been given, though the woman had received some quinine, but it was not probable that this drug had had any influence in causing inversion, nor had the cord been pulled upon until the placenta and uterus were distinctly visible at the vulva. The patient was in shock and as it had not been overcome at the end of two hours or more, it was decided to try to replace the uterus, which, although accomplished with great ease, was followed by death.

The high mortality rate on reinverting the uterus, especially when the inversion had been long in existence,

appeared in the discussion, and the speakers would do hysterectomy rather than jeopardize life by using too much force, as was apt to be done except in very recent cases.

Labor Obstructed by Ovarian Tumor.—Dr. F. A. King, of Washington, read the paper, which was devoted largely to the relation of a case. The "Transactions" of the society contained no paper on the subject of ovarian tumors obstructing labor, and cases were few. The patient entered the hospital on the fifth day of labor, yet she was in good condition. He made out a facial presentation by passing up two fingers between the tumor and pubis. The tumor completely filled the pelvis, and was so tense that he was able to say it was fluid, not solid, after tapping it. The treatment consisted in drawing off the fluid by tapping through the rectum, after which labor was completed without difficulty. The tumor was irrigated.

The child had been dead for some time. The patient did not return for observation, but after six weeks he saw her in another hospital, health much reduced, tumor as tense as before. It had refilled, and again being evacuated she regained her health.

The nature of the fluid was this time pus.

He had found no systematic collection of cases since Playfair's, 1868, fifty-seven cases, with a maternal mortality of thirteen. Nine cases treated by puncture, all the mothers recovered and six children were saved. The treatment had to be where there was marked obstruction, abdominal section, puncture of tumor, mutilation of the child.

Membranous Dysmenorrhœa, Its Treatment by Curettage and the Application of Two and One-half Per Cent. Solution of Carbolic Acid.—Dr. Thaddeus A. Reamy, of Cincinnati, reported three marked cases of membranous dysmenorrhœa, the cast being complete or almost complete at each menstrual period, the pain and other symptoms urgently demanding relief. One was in an unmarried woman. The treatment was the point especially impressed, and had cured each case. It consisted in thoroughly curetting the uterus five days before the expected period by sharp curette, followed by the dull one, then many and thorough applications on cotton to the interior of the uterus of two and one-half per cent. solution of carbolic acid, repetition of this full procedure a few days after the period, usually the first period was skipped, and in the same manner twice at the next period.

He had treated other cases in the same manner with equal success, but they were not as typically membranous. The cause was regarded as inflammatory.

Dr. T. A. Emmet said he had not been so successful in the treatment of membranous dysmenorrhœa.

The Operative Treatment for Myo-Fibroma of the Uterus.—Dr. Boldt, of New York, read this paper. He considers the majority of palliative measures employed in the treatment for fibroids as minor operative procedures, especially is this the case with galvanism and the use of the curette. He has been able to relieve the symptoms, *i.e.*, pain and hemorrhage, in a number of cases, but has never succeeded in reducing the size of the tumor. He would, however, not advise a capital operation, like hysterectomy, in an ordinary case of interstitial myoma, until a fair trial with the galvanic current had been made, that is not less than twenty to thirty applications. The danger of causing softening and suppuration, secondarily, consequent to the use of the electric current or the curette must ever be borne in mind.

The necessity of a capital operation like oöphorectomy or hysterectomy will depend very much upon the social position of the patient; the impecunious patient is more apt to require such course than the woman who can enjoy rest and home comforts. Oöphorectomy is not always sufficient to bring about the desired result, as is shown by many fibroids which do not start to increase markedly in size until after the menopause. The danger of malignant degeneration of the endometrium, and the tumors and disintegration at this time must play an important rôle in the consideration of the treatment to be adopted. That a comparatively small number of patients require operation seems to be shown from his observation of three hundred and twenty-one patients; only in fifty-seven cases was a capital operation advised. For enucleation per vaginam it is necessary that the tumor be of moderate size and submucous, and that the cervix is dilated or dilatable.

If a myomectomy can be done, that should be the operation of choice, because it leaves the generative organs in good condition.

Split the capsule, enucleate the tumor, and sew up the bed with buried catgut suture; if, however, too much of the uterine body is involved, complete hysterectomy should be done if the patient is in sufficiently good physical condition to stand an operation requiring so much time; the long time being the only factor, in the opinion of the author, which can be held out against the method.

The necessity of drainage does not exist; on the contrary, some of the favorable features are that no drainage is needed.

The pelvic floor is not weakened by taking out the cervix, as is practically shown by the experience gained in vaginal hysterectomy. Its advantages are in saving time to the patient: less danger from sepsis; less danger of a hernia; and no greater danger from hemorrhage.

Technique of Operation.—The patient is prepared in the ordinary way, with which all experienced operators are familiar, and then the operation is commenced from below, if the case is suitable for this, by ligating the parametria as high up as possible, in the same manner as in vaginal hysterectomy for cancer, except that we do not ligate far away from the cervix. The vagina is likewise detached anteriorly and posteriorly from the cervix, and the bladder detached as far as can be done without unusual exertion, the cul-de-sac of Douglas being opened, first or last, whichever is most convenient. The object to be attained is to free the lower segment of the cervix, then the operation from above is materially simplified; this becomes especially apparent in cases where the pelvic floor is rigid. Now the vagina is packed with iodoform gauze, a strip of which protrudes into the peritoneal cavity by way of the cul-de-sac.

Next the abdominal section is made in the usual way, and the rest of the uterine attachments are tied off in sections and cut. To avoid injury of the bladder, the viscus, just prior to its detachment above, especially if it is spread over the tumor itself, should be partly distended with a mild boric-acid solution to show such attachments, then about half an inch above the attachment, whether it is only utero-vesical fold or to the tumor, an incision is made and the remainder of the bladder is separated.

After excision of the myomatous uterus the vagina and floor of the pelvis are closed: all that can be seen from above is the continuous catgut suture with which the pelvic peritoneum has been closed, and a few small pedicles from the upper parts of the broad ligaments, the adnexa, it is self-understood, having been ligated off at the beginning of the abdominal work, or as soon as was practicable. The abdominal wound can now be closed.

In large tumors which do not crowd into the pelvis, but, on the contrary, pull the cervix and vagina high up toward the upper part of the pelvic cavity, so that the portio can hardly be reached by the examining finger, this technique is out of the question, and the whole work must be done from above. But in this latter class the operation from above only offers no particular difficulty; it is in fact, a comparatively easy operation, decidedly easier than most operations for the removal of suppurating adnexa. The parametrial stumps are secured in the same manner by successive ligation from above. The floor of the pelvis is closed off precisely in the same way; the only difference is, the cul-de-sac of Douglas is opened per cœliotomy wound, which, however, may also become more expedient in the cases in which I advise the work to be done from below. It may be that in some such cases the opening cannot be readily made into the peri-

toneal cavity after the vaginal mucosa has been cut; then I would never exert myself endeavoring to accomplish it, as the vagina has already been separated all around the cervix. The peritoneum is easily opened subsequently. I have, however, always succeeded without difficulty in opening the cul de sac from below.

The Technique of Primary Cœliotomy in Advanced Ectopic Gestation.—Dr. William T. Lusk, of New York, read a paper relating a case and giving condensed histories of the few more similar ones on record in which cœliotomy had been performed for advanced ectopic gestation. After studying the methods and results in the cases which had been reported he decided to remove the entire placenta and sac in the case which had come under his observation after about the fifth or sixth month. The small intestines were adherent everywhere, the uterus was attached to the tumor at the lower posterior surface on the right, the left tube was of normal dimensions; the lower segment of the sac occupied the entire pelvic space; evidently it had started in the right tube and the subsequent development had been to a great extent between the folds of the broad ligament. He first attempted to sever the attachments to the intestines, but there was profuse bleeding from the sac surface. He then tied the ovarian arteries. Two ligatures were applied to the uterine surface, and for further security he tied the left ovarian arteries, as there were some adhesions on this side also. These ligatures controlled bleeding to a marked degree. Then cutting down to the ovum, its separation was easily effected by the fingers. There was marked hemorrhage on rupture of the sac, and compression of the aorta was resorted to during the completion of enucleation. Hemorrhage from the placental site was controlled by pressure with gauze. Remnants of membranes attached to the intestine were removed, the sac was tied off as well as could be done. The child lived twenty-five minutes, its length being about twelve inches, its weight about twenty-four ounces. The patient suffered a good deal from shock, but recovered. The gauze was gradually withdrawn and the sinus had nearly closed.

The number of cases thus far reported of primary operation for advanced ectopic gestation was thirteen. The author did not approve of waiting in these cases.

The Elastic Ligature in Supra-vaginal Hysterectomy.—Dr. R Stanbury Sutton, of Pittsburg, presented the paper. While he was not wedded to either the intra- or extra-peritoneal treatment of the stump after removal of the body of the uterus for fibroids, yet he had for several years employed the extra-abdominal because of the less mortality. He had used the wire constrictor of Koeberle until he lost a patient by hemorrhage from the stump, an accident which some had held to be impossible. Since then he had used the elastic ligature of Kleeberg, and had not found a solitary objection to it. He was inclined to believe that we were on the eve of adopting the removal of the cervix entirely.

Hystero-epilepsy; Report of Seven Cases, Most of them Cured by Cœliotomy.—Dr. H. Marion Sims, of New York, read a paper in which he detailed the histories of seven marked cases of hystero-epilepsy which he had cured by operative procedures. He was led to report the cases more especially because of the few of this nature found in the literature. The recoveries could be said to be permanent, as there had been no return of the attacks, the oldest case dating back seven years. Each of the cases had been treated by ordinary means, local applications, etc., for long periods without any improvement. Five of the patients had been submitted to extirpation of the appendages with the result stated in the title of the paper; two to intra-uterine treatment, without coeliotomy.

Dr. Gordon, of Maine, said he had had a number of similar cases cured by removal of the appendages and had read a paper upon the subject in 1886.

Dr. Reamy, of Cincinnati, thought there was danger of operating for the cure of hystero-epilepsy, not only with result of unsexing the woman but of failing to cure the epilepsy and perhaps rendering her condition worse. He had known instances where insanity had followed.

Dr. Ford, of Utica, had some years ago been given permission at one of the State asylums to try this means of treating hystero-epilepsy cases in a few instances and the result had led him to discountenance the procedure. There had been only a modification of the symptoms, not a cure. The same was true in one case of castration for epilepsy in the male

There was some further discussion upon the subject, during which attention was called to the fact that in the cases operated upon by Dr. Sims actual disease of the appendages was found. Also, that the appendages should never be removed with the expectation of curing true epilepsy. The cases reported, it should be remembered, were of hystero-epilepsy.

Internal Crossing of the Ovum with Report of a Case of Double Ectopic Gestation, Possibly Supporting the Theory.—Dr. Henry C. Coe, of New York, read the paper and related the case. "Innere Ueberwanderung des Eies" was an expression which was difficult to render perfectly into English. It signified, he said, the supposed migration of the impregnated ovum from the tube in which impregnation occurred into the uterine cavity and thence into the opposite tube, in which it remained and developed with the usual results of ectopic gestation.

The clinical history of the case related pointed to tubal gestation on three occasions more or less widely separated. Finally the patient was operated upon by Dr. Coe. On opening the abdomen, the pelvic cavity was found to be shut off by the adherent omentum and intestines. On separating these, fluid blood and old clots welled up from Douglas's pouch. Behind the right broad ligament—it was on this side the tumor had been felt—and adherent to the side of the uterus was a mass the size of an orange, which was seen to be an unruptured sac without a pedicle. Inserting his hand to the bottom of the pelvic cavity he encountered a fœtus between the third and fourth months floating in the fluid and coagulated blood. It made vigorous movements for three or four minutes. The further points in the case will appear from the following review made by the author. There was no doubt, he said, that the old sac was an unruptured extra-uterine pregnancy of twelve years' standing. The symptoms noted at that time by a doctor in Brooklyn were quite characteristic of that condition without either the phenomena or local condition suggestive of internal hemorrhage. Moreover, the persistence of a distinct circumscribed tumor for many years, together with its appearance before and after removal, proved that the sac remained intact, the fœtus living to the age of three months or more, then becoming mummified. The second attack, two years after the first, was not easy to explain. The symptoms referable to the recent ruptured ectopic gestation were quite characteristic. The examination of the specimen had been made by Dr. Williams, of Johns Hopkins, and it revealed the fact that the tumor involved the right broad ligament, its contents consisting of the remains of the mummified fœtus. The more recent ectopic gestation had taken place in the same tube outwardly from the older tumor, there had been rupture with escape of the fœtus which Dr. Coe had found free in the pelvic cavity and viable. The left ovary contained a corpus luteum of pregnancy, the right none. The right tube was occluded at the uterine end, but was open at the fimbriated extremity. The inference drawn by both Dr. Coe and Dr. Williams, who discussed the case, was that the impregnated ovum from the left side had been wafted over internally to the right side, had entered the right tube at its fimbriated extremity, and finding an obstruction at the point of the previous tubal pregnancy remained near the outer end, and developed until the sac ruptured. In some regards the case was unique.

Dr. Johnstone, of Cincinnati, had operated on a case which he thought supported the view which he advanced that when the ovum from an ovary could not reach the

uterus through its own tube because of occlusion, the fimbriated extremity of the other tube reached across and directed it down to the uterus from that side.

Dr. Williams said this theory was not new, but it was both improbable and lacking in clinical evidence which could not be readily explained on more rational grounds.

The Origin of Dermoid Tumors of the Ovary.—Dr. Arthur W. Johnstone, of Cincinnati, read a paper in which he briefly reviewed the theories which had been advanced in explanation of the development of dermoid cysts. His labor had been much simplified by the writings upon the subject of Bland Sutton. The author gave reasons, part of them already stated by Sutton, for rejecting the view that such cysts were the result of some embryonic defect in the tissues of the mother, and advanced the new idea that they were caused by some form of abortion of the Graafian follicle.

The Operative Treatment of Complete Prolapsus Uteri et Vaginæ.—Dr. George M. Edebohls read the paper. Personally he was not wedded to any routine line of operative treatment. His objection to routine practice of total extirpation of the uterus for prolapsus of that organ and the vagina were based on two grounds mainly: 1, Because the practice was opposed to that rule of conservative surgery which called for the preservation of all organs which by their presence neither menaced life nor health; 2, because total extirpation neither lessened the danger nor simplified the operative technique, except, perhaps, when practised after the method of Polk.

Dr. Edebohls insisted upon ventro-fixation of the uterus, in connection with whatever plastic operations (on the vagina) might seem necessary. Shortening the round ligaments was unreliable in these cases. Narrowing the vagina by lateral denudation and suturing was preferred to antero-posterior colporrhaphy, as cystocele was less likely to occur subsequently. All the operations should be done at one sitting, and they had varied in number from three to five.

The several operations consisted, according to the case, in ventral fixation, amputation of cervix, colporrhaphy, perineorrhaphy, curettage. The result had been almost uniform retention of uterus in its replaced position and relief of symptoms, the cases numbering twelve or more.

Dr. T. A. Emmet had not seen a case of complete prolapse of the uterus and vagina which he had not been able to cure by plastic operation, but he did not doubt such cases might exist. Operations upon the anterior vaginal wall for holding up the prolapsed uterus were failures. He did not ventrally fixate the uterus, and if this were done it would cause stretching and straightening of the vessels and defeat the object for which the fixation was made unless it were neither too high nor too low.

Dr. Polk found complete prolapsus in hard-working women, and the surest relief from hysterectomy.

Dr. Dudley, of Chicago, and Dr. Shattuck, of Boston, agreed with Dr. Emmet that a plastic operation would almost uniformly succeed, and it should have for its object placing the axis of the uterus at an acute angle with that of the vagina, for as long as their axes were the same the uterus would act as a wedge and descend again.

The Results of Aseptic Cœliotomy.—Dr. William H. Wathen, of Louisville, read a paper with this title, but left out most of that portion giving results, and gave a detailed account of the steps taken during his operations in their relation to asepsis and antisepsis. He avoided multiple technique, using as few instruments as possible, etc. Removal of considerable omentum had not added much to the danger. He never used vaginal drainage except in pelvic abscess or hysterectomy for cancer. He seldom found drainage necessary.

Dr. E. C. Dudley thought the whole matter might be summarized, so far as operations in the abdomen were concerned, by saying that it did not matter so much as to what one took out as what he put in.

Dr. Gordon, of Portland, Me., thought operations ought always to be done in the forenoon, as the operator and patient were then in better condition, and it saved the patient hours of anxiety and did away with the necessity for food before giving the anæsthetic.

Pathology and Treatment of Injuries of the Pelvic Floor.—Dr. A. J. C. Skene, of Brooklyn, read a paper on this subject. The few facts which he had to present had been gathered during observations made from the standpoint of both physician and surgeon.

Considered as a mechanical structure the pelvic floor resembled a diaphragm composed of muscles and fascia which closed the pelvic outlet. Its borders were attached to the bony walls, and it was held at its proper elevation by the levator ani muscles. Its mechanism was based upon the principles of the suspension bridge, the anchorage being represented by the pelvic bones, the floor representing the bridge, and the levator ani muscles corresponding to the sustaining cables. All injuries sustained by the pelvic floor were divided into two classes: 1. Those that occurred in the median line in a direction corresponding to the axis of the pelvis; 2, those injuries which occurred above the floor itself—transverse internal lacerations.

Lacerations in the median line occurred in various forms and degrees: 1. a solution of continuity of all the tissues extending from the posterior commissure to the sphincter ani; 2. the same injury plus laceration of the sphincter. To these varieties, which had been recognized in all ages, he had added another, viz., subcutaneous laceration of the muscles and fascia in the median line, usually limited to the transverse perinei muscle and fascia, but in rare cases involving the sphincter ani, he having seen three cases, possibly more.

The second class of injuries, which were transverse, and had been described as internal lacerations, consisted in laceration of the anterior fibres of the levator ani muscle and fascia, and this was usually attended with separation of the muscular layer of the vaginal wall from the pelvic floor. As a rule, if there was laceration of the ani it was subcutaneous, not attended with laceration of the mucous membrane of the vaginal wall.

Lacerations were easily detected by grasping the pelvic floor in the median line between the thumb and finger. Transverse lacerations confined to muscle might be mistaken for sagging of the pelvic floor following delivery from temporary paralysis.

Speaking of the pathological sequelæ, Dr. Skene was fully convinced that, although rectocele was said to follow transverse lacerations, it could do so in only rare instances; that the so-called rectocele was not a rectocele at all, but a prolapsus of the vaginal wall and a varicose condition of the veins. This form of injury, when it involved the levator ani, was attended by more distressing symptoms and secondary pathological changes than any other, as had been pointed out by Dr. Emmet. When it had lasted years atrophy of the levator ani and other structures occurred and no operative measure could then effect a cure, absorption took place in the pelvic floor, produced by sagging of the latter, and the thinning of the tissues might lead one to suppose there had been subcutaneous laceration.

In regard to complete laceration involving the sphincter ani he accepted in full the pathology and treatment as described by Dr. Emmet. There should by this time be more definite agreement among operators regarding repair of injuries of the pelvic floor. In the median line injuries he operated by simply removing the scar tissue, vivifying the ends of the muscles and fascia which had been divided. The vaginal wall which had been attached to the lower angle of the laceration was liberated and raised up so as to form the inner surface of the pelvic floor. The lateral surfaces were united with sutures, the upper two or three taking in the posterior surface of the vaginal wall, and uniting it to the inner surface of the pelvic floor.

In complete operations involving the sphincter ani he followed closely the principles laid down by Dr. Emmet.

In subcutaneous laceration in the median line which involved the fascia and transversus perinei alone, he made the laceration complete by dividing the integument from the posterior commissure down to the upper border of the sphincter ani, did necessary trimming of superfluous tissue and closed substantially as in recent lacerations.

In the treatment of transverse or internal lacerations, he had found Dr. Emmet's method meet every indication where the pelvic floor itself was in perfect condition, but he had found it necessary to do something more when the pelvic floor had sustained a subcutaneous laceration or when atrophy had occurred in the median line from stretching. He had also obtained better results by treating the so-called rectocele somewhat differently. The author produced by incision a complete median laceration, and the angles of the vagina were brought together down to the muscular tissue of the pelvic floor, the muscle, fascia, and integument were then closed from below upward, the enlarged vessels and cellular tissues were then crowded backward and the vaginal wall united to the floor of the pelvis with the sutures which brought together the lateral edges of the pelvic floor.

For prolapsus of the bladder and urethra he had given up colporrhaphy, and for several years had operated to reunite the severed muscle fibres and fascia to the subpubic ligament.

Clinical Report of Pyosalpinx Treated by Uterine Drainage, with Subsequent Conception.—Dr. Robert A. Murray, of New York, read a paper on this subject. It having been taught so recently that whenever a tube contained pus it should always be removed, the title of his paper might sound strangely. The author related only six cases because their histories were full and definite, but others about equally convincing to himself had occurred in his practice. He was somewhat surprised that more like cases had not been published, as it was his belief that not infrequently pus tubes recovered by escape of the pus into the uterus. The cases of this nature of which he read the histories were six in number, in three the pyosalpinx having been of gonorrhœal origin, in three of puerperal origin. A sufficient proof of recovery was the disappearance after treatment of the swelling located in the tube and the occurrence of pregnancy, the author attending the patients in more than one confinement in some instances. In all the cases reported the history of gonorrhœal or puerperal pyosalpinx was clear, and the diagnosis of the location of the swelling and of its nature was demonstrated by seeing the pus come from the uterus when the tube was pressed upon, other physicians being witnesses to this phenomenon as well as himself. The treatment had consisted of thorough curettement of the uterus for endometritis, washing it out, application of carbolic acid, and drainage. The class of cases of pyosalpinx which offered a fair chance of recovery by this means, without the necessity for removing the appendages, were those in which the tubes were on a level with the uterus, movable, patent, and those in which, if lower down, they could be lifted up. Where there were adhesions and the tubes were blocked, recovery would be prevented by interference with drainage into the uterus.

The President said that if the author's experience were corroborated by cases in the practice of other gentlemen, this was one of the most important papers read before the society.

In its discussion Dr. Johnstone related a case in which he witnessed drainage of hæmatosalpinx into the uterus, and Dr. Edebohls had had some experience like Dr. Murray's, and did not doubt that pyosalpinx did sometimes recover by drainage through the uterus and the treatment of endometritis. Dr. Noble expressed doubt. Dr. Gordon spoke of treatment of endometritis, practising dilatation alone for drainage, not introducing gauze or a tube.

Vaginal Enterocele in Pregnancy and Labor.—Dr. B. C. Hirst, of Philadelphia, related a single case which had come under his observation, of vaginal enterocele complicating pregnancy and labor, and said he had been able to find only twenty-seven on record. The tumor formed by the enterocele was very tense during the labor, and rupture of the sac was feared. The efforts of two assistants were necessary to hold the enterocele out of the way while he extracted the small premature fœtus.

Calcified Tumors of the Ovary.—Dr. J. Whitridge Williams, of Johns Hopkins, read the paper and presented three specimens which had been sent to the laboratory for examination from various parts of the country. It was almost the universal mistake for the operator to send such specimens with the idea that they were osteoma, when in reality they were about uniformly calcified fibromata, and this diagnosis should always be made until the opposite was proven. Calcified tumors of the ovary were very rare. They seldom attained a considerable size, and this was easily explained by the fact that the process was one of degeneration, not of growth. One of those sent him was about the size of a hen's egg or smaller, and extremely hard. Another had been sent him by Dr. H. C. Coe, and was a calcified corpus luteum. The clinical history did not differ essentially from that of other tumors of the ovary, but the exact diagnosis could not be made, owing to the small size of the tumors, until the abdomen had been opened. The paper gave a chemical analysis of some of the specimens, referred to the literature, and described the process of calcification when it occurred in the structures of the body. The author replied to a question by Dr. Currier, that he did not think calcareous fibroma of the ovary had any relation to the gouty or rheumatic diathesis, as had calcareous deposits in the joints. They were not deposits in the ovaries but degenerative changes of existing tissue. The rest of the ovary usually retained its function.

Some Elements of Success in Cœliotomy.—Dr. Lapthorn Smith, of Montreal, read this paper. Among the statements were the following. The author now had such faith in Howard Kelly's method of disinfecting the hands that he was not afraid to go from a puerperal septic case to an operation. He had done away with sponges. The site of operation was rendered perfectly clean by keeping soap and water applied for two or three days before operating. Mural abscesses were often due to bruising by pressure forceps and could be avoided. Fistulæ following operations were apt to have their origin in silk ligature, consequently he used gut. The custom of removing the sutures from the abdominal wound in five or six days favored hernia, as the union was of new tissue which would stretch, as would that uniting the divided tendon achilles in operations for talipes. Therefore he united the abdomen by silkworm gut and left it in a month. He kept the external wound covered with boracic acid powder, which, keeping the parts dry, left no moisture for the development of germs. Irrigation should take the place of sponging out the peritoneal cavity, for the sponges were irritating and might also cause infection. He condemned styptics for checking oozing in the abdominal cavity. Operations should not last over an hour, otherwise there would be danger of death from anæsthesia, though usually attributed to shock.

Dr. Baldy and Dr. Sims discussed the paper.

Practical Points in Dress Reform.—Dr. Robert L. Dickinson, of Brooklyn, read a paper, which was illustrated by diagrams, calling attention to certain practical points in the reform of dress of women, and referring more briefly to the physiological and other reasons for such reform. It was only necessary in a meeting of physicians to merely mention the interference of the corset, bands, and overlapping of the several articles of wearing apparel with abdominal respiration, physiological development, and graceful motion. One could hardly hope during fashion's reign for the sudden general adoption of radical reforms, yet it was the duty of physicians to do what they could to induce girls and women to discard harmful modes of dress. The practical points which he had to suggest permitted, as far as was consistent with physiological laws, of so dressing as not to appear odd. Five illustrations were given, four showing essential arti-

cles of wearing apparel. The first was the undergarment, fitting closely, made of one piece, extending from neck to ankles; the second, only for use on going out in the winter, consisting of heavy knit goods, closely fitting, drawn on up to the waist, retaining its place by its elasticity; the third was a skirt and waist in one piece, made of stiff muslin, hanging by broad bands from the shoulders, and intended to protect the dress from the underwear and to prevent exposure of the limbs: the fourth was the dress itself, which also consisted of one piece, and hung from the shoulders; the fifth article was not an essential, but was added to conform to fashion's demands, being a kind of sacque.

Dr. King and Dr. E. C. Dudley made a few remarks upon the subject, warmly approving the object of the paper, to effect a reform in woman's dress, and on motion of Dr. Dudley a vote of thanks was tendered the author.

The Question of Operating in Chronic Ovaritis.—Dr. Noble, of Philadelphia, read the last paper of the session, on the above subject. It was his purpose to show that there were some cases of inflammation of the ovaries of a chronic character, with either slight thickening and increase in size, or atrophy, and that the symptoms being unendurable and impossible of relief by other measures, removal of the appendages was called for. The number of cases of this kind so operated upon by him was thirteen, and in two he performed cœliotomy twice because the symptoms had not been sufficiently relieved after taking away one tube and ovary. Unfortunately the removal of the uterine appendages in such cases was liable to abuse, but he thought it was the duty of the profession to give women this last hope after local and constitutional measures had failed and the symptoms were such as to render life miserable. He thought that death following so simple an operation could be due only to gross carelessness unless there were kidney or heart disease. Other treatment should be tried a year or two before resorting to extirpation.

Dr. Williams, of Baltimore, said these cases were not chronic ovaritis from a pathological standpoint. They were rather cases of cirrhotic ovary from imperfect development.

Election of Officers.—*President*, Dr. William T. Lusk, of New York; *Secretary*, Dr. Coe; *Treasurer*, Dr. Mann, for the ensuing year.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 20, 1893.

	Cases.	Deaths.
Typhus fever	15	6
Typhoid fever	11	6
Scarlet fever	190	23
Cerebro-spinal meningitis	20	23
Measles	165	2
Diphtheria	93	37
Small-pox	6	2
Cholera	0	0
Varciella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

The Present Medical Law of New York State.—The following is an authorized copy of the medical law as signed by the Governor, and just received from Albany. It is known technically as Article 8, Chapter 661 of the Laws of 1893, and is a codification of all the medical laws previously in existence relating to licenses, registry, preliminary academic education, and State boards of medical examiners, together with a few amendments unanimously agreed upon and found necessary after one year's trial of the licensing and registry laws.

Practice of Medicine (Laws of New York, 1893, ch. 661; previous laws relating to the practice of medicine were repealed May 9, 1893, when this new law took effect):

Definitions, as used in this article: 1. University means University of the State of New York. 2. Regents means board of regents of the University of the State of New York. 3. Board means a board of medical examiners of the State of New York. 4. Medical examiner means a member of a board of medical examiners of the State of New York. 5. Medical school means any medical school, college, or department of a university, registered by the regents as maintaining a proper medical standard and as legally incorporated. 6. Medicine means medicine and surgery. 7. Physician means physician and surgeon.

§ 140. Qualifications. No person shall practise medicine after September 1, 1891, unless previously registered and legally authorized or unless licensed by the regents and registered as required by this article; nor shall any person practise medicine who has ever been convicted of a felony by any court, or whose authority to practise is suspended or revoked by the regents on recommendation of a State board.

§ 141. State boards of medical examiners. There shall continue to be three separate State boards of medical examiners of seven members each, each of whom shall hold office for three years from August 1 of the year in which appointed. One board shall represent the Medical Society of the State of New York, one the Homœopathic Medical Society of the State of New York, and one the Eclectic Medical Society of the State of New York. Each of these three societies shall at each annual meeting nominate twice the number of examiners to be appointed in that year on the board representing it. The names of such nominees shall be annually transmitted under seal by the president and secretary prior to May 1 to the regents, who shall, prior to August 1, appoint from such lists the examiners required to fill any vacancies that will occur from expiration of term on August 1. Any other vacancy, however occurring, shall likewise be filled by the regents for the unexpired term. Each nominee, before appointment, shall furnish to the regents proof that he has received the degree of doctor of medicine from some registered medical school and that he has legally practised medicine in this State for at least five years. If no nominees are legally before them from a society the regents may appoint from members in good standing of such society without restriction. The regents may remove any examiner for misconduct, incapacity, or neglect of duty.

§ 142. Certificate of appointment; oath: powers. Every medical examiner shall receive a certificate of appointment from the regents, and before beginning his term of office shall file with the Secretary of State the constitutional oath of office. Each board, or any committee thereof, may take testimony and proofs concerning all matters within its jurisdiction. Each board may, subject to the regents' approval, make all by-laws and rules not inconsistent with law needed in performing its duties: but no by-law or rule by which more than a majority vote is required for any specified action by the board shall be amended, suspended, or repealed by a smaller vote than that required for action thereunder.

§ 143. Expenses. From the fees provided by this article, the regents may pay all proper expenses incurred by its provisions, except compensation to medical examiners: and any surplus at the end of any academic year shall be apportioned among the three boards pro rata according to the number of candidates whose answer papers have been marked by each.

§ 144. Officers: meetings; quorum; committees. Each board shall annually elect from its members a president and a secretary for the academic year, and shall hold one or more meetings each year pursuant to call of the regents, who may also call joint meetings of the three

boards or of their officers. At any meeting a majority shall constitute a quorum; but questions prepared by the boards may be grouped and edited, or answer papers of candidates may be examined and marked by committees duly authorized by the boards and by the regents.

§ 145. Admission to examination. The regents shall admit to examination any candidate who pays a fee of $25 and submits satisfactory evidence, verified by oath if required, that he: (1) Is more than twenty-one years of age; (2) is of good moral character; (3) has the general education required in all cases after August 1, 1895, preliminary to receiving the degree of bachelor or doctor of medicine in this State: (4) has studied medicine not less than three full years, including three satisfactory courses, in three different academic years, in a medical school registered as maintaining at the time a satisfactory standard: (5) has either received the degree of bachelor or doctor of medicine from some registered medical school, or a diploma or license conferring full right to practise medicine in some foreign country. The degree of bachelor or doctor of medicine shall not be conferred in this State before the candidate has filed with the institution conferring it the certificate of the regents that three years before the date of the degree, or before or during his first year of medical study in this State, he had either graduated from a registered college or satisfactorily completed not less than a three years' academic course in a registered academy or high school; or had a preliminary education considered and accepted by the regents as fully equivalent; or had passed regents' examinations in arithmetic, elementary English, geography, spelling, United States history, English composition, and physics. Students who had matriculated in a New York medical school before June 5, 1890, shall be exempt from this preliminary education requirement, provided the degree be conferred before August 1, 1895. The regents may in their discretion accept as the equivalent for any part of the third and fourth requirement, evidence of five or more years' reputable practice of medicine, provided that such substitution be specified in the license.

§ 146. Questions. Each board shall submit to the regents, as required, lists of suitable questions for thorough examination in anatomy, physiology, and hygiene, chemistry, surgery, obstetrics, pathology and diagnosis, and therapeutics, including practice and materia medica. From these lists the regents shall prepare question papers for all these subjects, which at any examination shall be the same for all candidates, except that in therapeutics, practice, and materia medica all the questions submitted to any candidate shall be chosen from those prepared by the board selected by that candidate, and shall be in harmony with the tenets of that school as determined by its State board of medical examiners.

§ 147. Examinations and reports. Examinations for license shall be given in at least four convenient places in this State and at least four times annually, in accordance with the regents' rules, and shall be exclusively in writing and in English. Each examination shall be conducted by a regents' examiner who shall not be one of the medical examiners. At the close of each examination the regents' examiner in charge shall deliver the questions and answer papers to the board selected by each candidate, or to its duly authorized committee, and such board, without unnecessary delay, shall examine and mark the answers and transmit to the regents an official report, signed by its president and secretary, stating the standing of each candidate in each branch, his general average, and whether the board recommends that a license be granted. Such report shall include the questions and answers and shall be filed in the public records of the University. If a candidate fails on first examination, he may after not less than six months' further study, have a second examination without fee. If the failure is from illness or other cause satisfactory to the regents they may waive the required six months' study.

§ 148. Licenses. On receiving from a State board an official report that an applicant has successfully passed the examinations and is recommended for license, the regents shall issue to him, if in their judgment he is duly qualified therefor, a license to practise medicine. Every license shall be issued by the University under seal and shall be signed by each acting medical examiner of the board selected and by the officer of the University who approved the credential which admitted the candidate to examination, and shall state that the licensee has given satisfactory evidence of fitness as to age, character, preliminary and medical education, and all other matters required by law, and that after full examination he has been found properly qualified to practise. Applicants examined and licensed by other State examining boards registered by the regents as maintaining standards not lower than those provided by this article, and applicants who matriculated in a New York State medical school before June 5, 1890, and who receive the degree M.D. from a registered medical school before August 1, 1895, may without further examination, on payment of $10 to the regents and on submitting such evidence as they may require, receive from them an indorsement of their licenses or diplomas conferring all rights and privileges of a regent's license issued after examination. If any person whose registration is not legal because of some error, misunderstanding, or unintentional omission shall submit satisfactory proof that he had all requirements prescribed by law at the time of his imperfect registration and was entitled to be legally registered, he may on unanimous recommendation of a State board of medical examiners receive from the regents under seal a certificate of the facts, which may be registered by any county clerk and shall make valid the previous imperfect registration. Before any license is issued it shall be numbered and recorded in a book kept in the regents' office, and its number shall be noted in the license. This record shall be open to public inspection, and in all legal proceedings shall have the same weight as evidence that is given to a record of conveyance of land.

§ 149. Registry. Every license to practise medicine shall, before the licensee begins practice thereunder, be registered in a book kept in the clerk's office of the county where such practice is to be carried on, with name, residence, place and date of birth, and source, number, and date of his license to practise. Before registering each licensee shall file, to be kept in a bound volume in the county clerk's office, an affidavit of the above facts, and also that he is the person named in such license, and had, before receiving the same, complied with all requisites as to attendance, terms, and amount of study and examinations required by law and the rules of the University as preliminary to the conferment thereof; that no money was paid for such license, except the regular fees paid by all applicants therefor; that no fraud, misrepresentations or mistake in any material regard was employed by anyone or occurred in order that such license should be conferred. Every license, or, if lost, a copy thereof legally certified so as to be admissible as evidence, or a duly attested transcript of the record of its conferment, shall, before registering, be exhibited to the county clerk, who, only in case it was issued or indorsed as a license under seal by the regents, shall indorse or stamp on it the date and his name preceded by the words: "Registered as authority to practise medicine in the clerk's office of.....county." The clerk shall thereupon give to every physician so registered a transcript of the entries in the register with a certificate under seal that he has filed the prescribed affidavit. The licensee shall pay to the county clerk a total fee of one dollar for registration, affidavit, and certificate.

§ 150. Registry in another county. A practising physician having registered a lawful authority to practise medicine in one county, and removing such practice or part thereof to another county, or regularly engaging in practice or opening an office in another county, shall show or send by registered mail to the clerk of such other county his certificate of registration. If such certificate clearly shows that the original registration was of

an authority issued under seal by the regents, or if the certificate itself is indorsed by the regents as entitled to registration, the clerk shall thereupon register the applicant in the latter county, on receipt of a fee of 25 cents, and shall stamp or indorse upon such certificate the date and his name preceded by the words: "Registered also in.....county," and return the certificate to the applicant.

§ 151. Certificate presumptive evidence; unauthorized registration and license prohibited. Every unrevoked certificate and indorsement of registry, made as provided in this article, shall be presumptive evidence in all courts and places that the person named therein is legally registered. Hereafter no person shall register any authority to practise medicine unless it has been issued or indorsed as a license by the regents. No such registration shall be valid unless the authority registered constituted, at the time of registration, a license under the laws of the State then in force. No diploma or license conferred on a person not actually in attendance at the lectures, instruction, and examinations of the school conferring the same, or not possessed at the time of its conferment of the requirements then demanded of medical students in this State as a condition of their being licensed so to practise, and no registration not in accordance with this article shall be lawful authority to practise medicine, nor shall the degree of doctor of medicine be conferred *causa honoris* or *ad eundum*, nor if previously conferred shall it be a qualification for such practice.

§ 152. Construction of this article. This article shall not be construed to affect commissioned medical officers serving in the United States army, navy, or marine hospital service, while so commissioned; or anyone while actually serving on the resident medical staff of any legally incorporated hospital; or any legally registered dentist exclusively engaged in practising dentistry; or any manufacturer of artificial eyes, limbs, or orthopedic instruments or trusses in fitting such instruments on persons in need thereof; or any lawfully qualified physician in other States or countries meeting legally registered physicians in this State in consultation; or any physician residing on a border of a neighboring State and duly authorized under the laws thereof to practise medicine therein, whose practice extends into this State, and who does not open an office or appoint a place to meet patients or receive calls within this State; or any physician duly registered in one county called to attend isolated cases in another county, but not residing or habitually practising therein. This article shall be construed to repeal all acts or parts of acts authorizing conferment of any degree in medicine, *causa honoris* or *ad eundum* or otherwise than on students duly graduated after satisfactory completion of a preliminary and medical course not less than that required by this article as a condition of license.

§ 153. Penalties and their collection. Every person who shall practise medicine within this State without lawful registration or in violation of any provision of this article shall forfeit to the county wherein such person shall so practise, or in which any such violation shall be committed, $50 for every such violation, and for every day of such unlawful practice; and any incorporated medical society of the State, or any county medical society of such county entitled to representation in a State society, may bring an action in the name of such county for the collection of such penalties, and the expense incurred by any such society in such prosecution, including necessary counsel fees, may be retained by such society out of the penalties so collected, and the residue, if any, shall be paid into the county treasury. Any person who shall practise medicine under a false or assumed name, or who shall falsely personate another practitioner of a like or different name, shall be guilty of a felony; and any person guilty of violating any of the other provisions of this act, not otherwise specifically punished herein, or who shall buy, sell, or fraudulently obtain any medical diploma, license, record, or registration, or who shall aid or abet such buying, selling, or fraudulently obtaining, or who shall practise medicine under cover of a diploma or license illegally obtained, or signed, or issued unlawfully or under fraudulent representations, or mistake of fact in material regard, or who, after conviction of a felony, shall attempt to practise medicine; and any person who shall append the letters M.D. to his or her name, or shall assume or advertise the title of doctor in such a manner as to convey the impression that he is a lawful practitioner of medicine or any of its branches without having legally received the medical degree, shall be guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not less than $250, or imprisonment for six months for the first offence, and on conviction of a subsequent offence, by a fine of not less than $500, or imprisonment for not less than one year, or by both fine and imprisonment.

A Theory of "Mixed Infection" in Cholera.—Professor Nencki, Director of the Bacteriological Laboratory at the Institute of Experimental Medicine, in laying a new theory of the origin of choleraic infection before a special meeting of the Russian Medical Society of St. Petersburg has opened up a question that is still, even with the light that he maintains that he has thrown on it, enshrouded in much darkness. He states that whenever Dr. Blohstein, one of the four physicians sent to study the cholera epidemic in Baku and Astrachan, inoculated animals subcutaneously with an infusion of Koch's bacilli they remained unaffected and certainly showed no symptoms of cholera (*The British Medical Journal*). When, however, instead of the artificially cultivated bacillus he injected a portion of the discharges from cholera patients the animal died with all the usual symptoms of this disease; the cholera bacilli were of course present in these dejecta just as they had been in the first case, but as they had not acted in the first instance it followed that the presence of some other species of bacillus might account for the difference in the results obtained. He then found what he describes as two perfectly new micro-organisms, which, when injected alone were harmless, but where these two were united with the cholera organism and injected subcutaneously into any animal, it very rapidly died of Asiatic cholera, and he concludes, as a result of his experiments, that these three forms, not alone, but acting together, form the etiological factor in Asiatic cholera. It is a very remarkable fact that Dr. Blohstein should claim that he has discovered two perfectly new organisms in the excretions of cholera patients. These excreta have been so carefully examined from time to time that it appears almost incredible that he could have discovered two entirely new forms. It is, of course, perfectly possible that by improved methods he has been able to cultivate additional species of micro-organisms from the dejecta, but that he should claim to have come across two organisms hitherto unknown should render us rather chary about accepting all his other statements as absolutely proved. From time to time micro-organisms other than Koch's comma bacillus have been described as playing a most important part in cholera, while the bacillus coli communis, the almost chameleon-like organism, has been made to do duty in this *rôle* more than once. The Naples cholera bacillus and that found at Trieste may have been different from the comma bacillus, and it is quite possible that these two new organisms may be more or less closely related to some of the above. It is, of course quite possible, as has frequently been pointed out, that mixed infection plays a not unimportant part in determining the severity of the disease and the channels by which an animal may become infected, but until we have much more definite evidence than has at present been vouchsafed, it is impossible to give any very definite opinion on the subject.

A Gift to McGill University.—Sir Donald Smith has made another gift to McGill University of $100,000, to endow a chair of pathology and hygiene.

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Original Articles.

SOME REMARKS ON OXALURIA AND ITS RELATIONS TO CERTAIN FORMS OF NERVOUS DISEASE.[1]

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EVER since Prout[2] in 1820 first called attention to the occurrence of oxalic acid, principally as oxalate of lime, in the urine of persons suffering from a variety of diseases, and in later publications sought to establish oxaluria as a disease *sui generis* and characterized by well-marked symptoms, the excretion through the urine of oxalic acid in health and in disease has been a subject of much discussion. While Prout based his assumptions rather on hypothesis than on facts, Golding Bird[3] first demonstrated the occurrence of oxalate of lime crystals in the urine, which indeed had been seen and described by Brugnatelli in 1787, but not recognized by him as to their true chemical composition.

Numerous investigators took up the subject, and in England at least oxaluria obtained a place of its own in the nosological system. The symptoms were chiefly disturbances of the nervous and digestive systems. Mental depression, tædium vitæ, headaches, neuralgic pains, especially in the back and in the limbs, tremor, insomnia, impairment of vision even to complete amaurosis, loss of appetite, constipation, emaciation, are some of the many symptoms claimed as characteristic of this disease; the physical sign, the occurrence of more or less oxalate crystals in the urine.

In France the theory of oxaluria could not obtain a sure footing, and it was principally Gallois[4] who, after most careful investigation of the urine of healthy and of sick persons, maintained the temporary occurrence of oxalate of lime in the urine of perfectly healthy subjects of all ages and both sexes. He showed, furthermore, that oxalate sediments can occur in the most varied forms of disease and also after ingestion of certain kinds of food and certain drugs. Similar results were obtained by Bence-Jones.[6]

In Germany, Lehmann,[6] and especially Beneke,[7] studied the occurrence of oxalate of lime in the urine under the most varied conditions, and also came to the conclusion that oxalic acid is excreted under manifold conditions of disease, and that oxaluria as a distinct nosological type does not exist. A like result was reached by Smoler[8] who studied the urine in a very large number of persons suffering from all kinds of disease.

It is well to note here that all these investigations were made mainly with the microscope. The urine was allowed to stand for twenty-four hours or longer, and the sediment then examined for oxalate of lime crystals. A rough estimate of their number and size as they appeared in the microscopic field was considered all that was needed. After the studies of Beneke[1] and Neubauer,[2] who showed that acid sodic phosphate when present in the urine will hold the oxalate of lime in solution and prevent its sedimentation, it was frequently found necessary to add certain chemicals (calcium chloride and acetic acid) before making the microscopical examination. Though this rapid procedure gives results incomparably more trustworthy than the older and simpler method, it is nevertheless at best but a rough approximation and can in no wise take the place of exact quantitative determination.

All these investigations, and other and more exact ones, to which I shall have briefly to refer later on, while they opened up many new lines of research and left many points of fundamental importance unsettled, nevertheless appeared to establish one fact beyond doubt: the non-existence of oxaluria as an independent type of disease. Some years ago, however, Cantani[3] again raised the standard of oxaluria. On the basis of a number of clinical histories, the microscopic examination of the chemically prepared urine, and the effect of certain therapeutic measures, he elaborates an extremely plausible theory of the excretion of oxalic acid under normal and morbid conditions.

His theory it briefly this: Under normal conditions mainly such oxalic acid appears in the urine as is directly introduced into the system with the food. Under abnormal conditions the excreted oxalic acid may be derived from incomplete oxidation of the proteids; of uric acid and—and this is, according to Cantani, the principle source of pathological oxaluria—from incomplete oxidation of the carbohydrates. He asserts that when the system has been overcrowded for a length of time with an excess of carbohydrates, the organs and tissues whose duty it is to gradually transform these substances into the ultimate products of oxidation—water and CO_2, become in a measure exhausted and are rendered incapable of carrying oxidation further than the oxalic acid stage. An excess of oxalic acid, in the shape chiefly of oxalate of lime, is thus thrown into the blood and voided into the kidneys and urine, and morbid symptoms necessarily follow. That oxaluria does not follow in every instance of habitual abuse of carbohydrates, nor even in the majority of cases, is explained by Cantani on the assumption of individual predisposition, in which heredity, lesions of the digestive and nervous systems, corpulency, and indolent and pampered modes of living are leading factors.

It is interesting to note the parallelism of this view of oxaluria with the same author's theory of diabetes; the difference between the two diseases being mainly this, that in diabetes mellitus the exhausted tissues cannot tranform sugar at all, and it is voided as such; in oxaluria sufficient energy remains to transform the carbohydrates as far as the oxalic acid stage.

Cantani himself has not infrequently found oxaluria a concomitant of diabetes, and, in several instances in the case of diabetic patients, oxaluria alternating with glycosuria. Similar and very exact observations have been recorded by Fürbringer.[4]

The symptoms of pathological oxaluria are, according

[1] Read before the New York Neurological Society, January 3, 1893.

[2] For a very complete survey of the older literature on oxaluria, see Smoler, Studien über Oxalurie. Prager Vierteljahresschrift, xvii. Jahrg., Bd. i. & ii.

[3] Lectures on Physiological and Pathological Characters of Urinary Deposits. 1846.

[4] Mémoir sur l'oxalate de chaux dans les sédiments de l'urine, dans la gravelle et les calculs. Soc. de Biologie, 1859.

[5] Medico-Chirurgical Transactions, vol. xvii.

[6] Lehrbuch der physiol. Chemie, 1850.

[7] Zur Physiologie und Pathologie des phospors auren, und oxalsauren Kalks. 1850.

[8] Loc. cit.

[1] Loc. cit.

[2] Archiv für gemeinschaftl. Arbeiten Bd. iv., 1856. Ueber Oxalsäurebildung.

[3] Specielle Pathlogie und Therapie der Stoffwechsel-krankheiten. Deutsch von Dr. Hahn, Bd. II., Berlin, 1880.

[4] Zur Lehre von Diabetes mellitus. Deutsches Archiv f. klin. Medicin, Bd. xvi., 1875.

to Cantani, manifold, but in their aggregation sufficiently characteristic to admit of certain diagnosis. First and foremost is the excess of oxalate of lime in the urine, when not due to direct ingestion of oxalic acid with the food. This excess Cantani estimates by the aid of the microscope, but does not determine it by exact quantitative analysis. In a number of instances he succeeded by a complicated procedure[1] in obtaining oxalate of lime crystals from the blood serum. Prominent among other symptoms are those relating to the nervous system: mental depression, melancholia to the verge of suicide, extreme nervous irritability, impairment of memory and intellectual vigor, insomnia, sexual impotence, etc. Besides these and other nervous symptoms there are always disturbances of the vegetative functions. In almost all cases more or less rapid emaciation, loss of appetite, dyspeptic symptoms, such as eructations, flatulence, constipation, etc. In most of these cases there was dull pain in the back and in the region of the kidneys, and quite a number at various times passed oxalate gravel or calculi.

The therapeutic measures consisted, in all cases, in the enforcement of an absolute milk and meat diet, with alkaline waters as a drink.

Under the influence of this diet which was maintained for weeks and even months, nearly all patients rapidly recovered. The oxalate disappeared from the blood and urine and did not reappear, when, in the course of time, a mixed diet was again permitted. With the disappearance of the oxalate in the urine the patients regained flesh and recovered their normal healthy functions of the digestive and nervous organs. Those few that were not entirely cured, either owing to remissness in diet or because they withdrew from observation, were, nevertheless, materially improved.

It is not my object to enter into a detailed criticism of Cantani's most interesting and suggestive work. Permit me only very briefly to state a few of the objections that can be advanced.

In the first place, the absence of quantitative determinations leaves the whole superstructure of ingenious speculation without a solid foundation of facts comparable among themselves or with other similar ones. Furthermore, none of the other important constituents of the urine, such as urea and uric acid, have, it would appear, been taken into account. And yet it seems that these also, especially in cases of emaciation and grave metabolic disturbance, should claim a most careful consideration. Again, the clinical histories are not sufficiently detailed and explicit, and might often be construed in quite a different sense from that adopted by the author. The demonstration of a few oxalate crystals in the blood serum should be accounted a proof of pathological oxalæmia only after it has been established by numerous experiments that the like can never be found in healthy persons. Oxalate gravel and calculus can by itself not be accepted as proof of excess of oxalate in the urine, inasmuch as local tissue changes in kidney and bladder may cause local precipitation without absolute excess (Hoppe-Seyler), as is the case too with uric-acid calculus.

Lastly, and most important of all, it appears to me that Cantani has failed to show that the grave disturbances, particularly in the functions of the nervous and digestive systems, are due to the excess of oxalic acid as a primary cause. It is quite possible that under certain conditions very serious changes can take place in the ordinary metabolism of the system, as one of the results of which an excess of oxalic acid appears in the urine. That nervous disturbances or digestive lesions may possibly be the cause of these metabolic changes and the excess of oxalic acid an effect or only an incidental symptom, and perhaps an innocuous one, is by no means disproven. Nor is the effect claimed for the absolute meat and milk diet incompatible with this latter hypothesis. It is in considering these questions that the want of quantitative determination is most seriously appreciated.

If now we endeavor to ascertain what is the actual knowledge we possess at present concerning the excretion of oxalic acid and the physiological data relating thereto at our command, we will find a rather unsatisfactory state of affairs. On very few even of the fundamental points has unity of opinion been obtained, while the very large majority of questions pertaining to this subject are still enveloped in obscurity and doubt. It is certain that most plants and nearly all vegetables used for food contain oxalic acid; some of the latter, like tomatoes, rhubarb, rumex, bananas, apples, spinach, carrots, etc., a comparatively large percentage. It seems tolerably certain also, especially through the experiments of Gaglio,[1] that all or very nearly all the oxalic acid thus taken into the system reappears again untransformed in the urine, and some perhaps in the fæces, principally as oxalate. From this it follows that oxalic acid can and does occur in the urine of perfectly healthy persons, and that it may occur in quite large quantities if the diet is one rich in oxalic acid. On this point all authors are now agreed.

Is oxalic acid a constant component of the normal urine, like urea and uric acid? Is the oxalic acid in the urine due altogether to oxalic acid ingested, or are there chemical transformations and reactions normally going on which result in the production of certain, perhaps very minute, quantities of oxalic acid? These questions have been much discussed, but still await a conclusive answer. The fact that oxaluric acid ($C_3H_4N_2O_4$) has been found in normal urine[2] and that Auerbach[3] found oxalic acid in traces in the urine of dogs that were fasting, would seem to indicate that oxalic acid may originate in the course of normal metabolism. Even the fundamental question, What are the normal quantitative limits of oxalic acid excretion in the urine? has not been satisfactorily settled. Schultzen,[4] working with a method of his own, found an average of 0.1 in twenty-four hours. Fürbringer[5] undertook a large and most laborious and exact series of analyses after Neubauer's method. He found that, while the normal urine could contain mere traces, *i.e.*, less than 0.001 *pro die*, the normal maximum should be placed at not more than 0.02. In a later investigation in which he modified his method, Schultzen[6] established an average of from 0.02 to 0.07 as about normal. Salkowski[7] found in a perfectly healthy man 0.144. Latterly the subject has again been investigated by Wesley Mills[8] who, after a careful comparison of the methods of Neubauer and Schultzen, finds the results after Neubauer's method uniformly too small and the figures obtained according to Schultzen as approximately correct.

As regards the other questions hinted at above, still less unanimity obtains among investigators. It has long been ascertained that uric acid ($C_5H_4N_4O_3$) under the influence of artificial oxidation, before finally being resolved into carbonic acid and water, will give as intermediate products urea (CON_2H_4) and oxalic acid ($C_2H_2O_4$). This fact gave rise to the very plausible and at one time generally accepted theory that under pathological conditions oxalic acid in the urine resulted from incomplete oxidation of uric acid. In support of this theory Frerichs and Wöhler asserted that introduction of uric acid into the stomach was followed by increase of oxalic acid in the urine; an assertion which the very careful experiments of Fürbringer could not substantiate. As a necessary consequence of this theory it was claimed by many authors that an excess of oxalic acid in the urine is found in such diseases as are accompanied by disturbances of the respiratory system and increase of carbonic acid in the blood, and in which, therefore, the oxidations are sup-

[1] Loc. cit., p. 8.

[1] Ueber die Unveränderlichkeit der Kohlenoxyds und der Oxalsäure im thierischen Organismus. Archiv für experimentelle Pathologie und Pharmacologie, Bd. xxii. 1886 and 1887.

[2] Schunk, Journal f. prakt. Chemie, Bd. 100, p. 125.

[3] Zeitschr. f. klin Medicin, Bd. ii.

[4] Reichert u. Du Bois-Reymond's Archiv, 1868, pp. 719 and 720.

[5] Zur Oxalsäureausscheidung durch den Harn.

[6] Zeitschrift f. Analyt. Chemie, Bd. viii., p. 521.

[7] Virchow's Archiv, Bd. lii., p. 64. 1871.

[8] Virchow's Archiv, Bd. IC., 1885, p. 305 et seq. "Ueber die Ausscheidung der Oxalssäure durch den Harn."

posed to be diminished. (Pneumonia, phthisis, emphysema, valvular lesions of the heart, etc., etc.) We shall see that careful analysis furnishes no basis for these assumptions. The fact that uric acid can be separated into urea and oxalic acid in the test-tube by no means proves that this ever actually occurs in the living body. It is not impossible that oxalic acid can be derived from proteids, so, according to Kühne, from kreatine. On the other hand, the slow oxidation of sugar with uric acid can also produce oxalic acid, and Cantani, as we have seen, bases his entire theory on the assumed derivation of oxalic acid from the incomplete oxidation of the carbohydrates. The experiments bearing on these questions are comparatively very few and altogether unsatisfactory. So, for instance, while Burggrave, on the one hand, finds no oxalic acid whatever in the urine of dogs fed exclusively on meat, and sees the oxalic acid appear on the addition of even minute quantities of sugar to the meat, Wesley Mills, on the other hand, finds most oxalic acid (11.1 milligr. on the average) when the dogs are fed exclusively on meat, less (5.4 milligr.) when fed on meat and increasing quantities of bread. I do not propose to enter here into chemical and physiological details, nor to attempt to unravel the contradictions and obscurities with which all these fundamental questions are beset. I desire simply to ascertain whether, on the basis of careful quantitative analyses, any relations can be established between certain forms of disease, particularly of the nervous system, and the excretion of oxalic acid in the urine. My most sincere thanks are due to Dr. E. Rosenberg, of this city, to whose skill and scientific enthusiasm I am indebted for all the analyses made use of in this investigation. The method we employed was that of Schultzen.[1] In all cases the twenty-four hours' quantity was examined. In the majority of cases the acidity was determined by titration with $\frac{1}{10}$ normal alkali solution, and expressed in grammes of oxalic acid for the entire quantity. Nearly always a careful microscopical examination was made. In all cases the urea and uric acid were determined, besides oxalic acid. Every urine was examined for albumin and sugar, and in a number of instances phosphoric acid and the chlorides were also determined (see Table of Analyses).

We will now briefly review the cases and consider in the first place the nervous disturbances.

Mr. N. H—— (Table, Nos. 1, 2, 3, 4), about sixty-three years of age, when first seen by me complained of great nervous depression, increasing frequently to paroxysms of downright melancholia; sleeplessness, occasional rheumatic pains in the back and limbs, various dyspeptic symptoms, such as loss of appetite, eructation and distress after meals, constipation, loss of weight. A brother of Mr. H—— had died of general paresis, and the haunting dread of brain disease irresistibly overpowered our patient in his spells of depression. Though always "nervous," he had never had any serious physical illness. Syphilis was denied absolutely. He had always been a lover of the good things of the table and fond of sweets and many vegetables. He never drank to excess, but was fond of champagne and good wines with his meals. Repeated and careful examination failed to detect any evidence of organic lesion of any kind. His urine was rather concentrated, acid, free from albumin and sugar, but showed under the microscope numerous large and small oxalate of lime crystals. Here, then, was a case in all essential respects identical with the cases reported by Cantani as pathological oxaluria, and it was determined to investigate it analytically. The first analysis showed only 900 c.c. for twenty-four hours' quantity, specific gravity of 1.024, acid reaction, a sediment consisting of urates and triple phosphates, 30 grammes of urea and 0.135 of oxalic acid. It is possible that, owing to some mishaps in the manipulation, the figures for the oxalic acid may have turned out too large; nevertheless there was a decided excess, and I am willing, for the sake of further discussion, to accept the figures as correct. The patient was put on Cantani's diet: sweets, vegetables, and amylaceous matter were strictly prohibited, and instead of wines he drank alkaline waters. Nevertheless the patient did not improve until ordered away from the city, when he rapidly regained spirits and sleep. On January 15, 1890, the urine was 1,200 ctgms. for twenty-four hours, specific gravity 1.024, acid 2.5, showed under the microscope numerous octahedra, urea three per cent.; uric acid, 0.6; oxalic acid, 0.05. This amount comes well within Schultzen's normal limits. The patient felt well and had not kept very strictly to his diet. About six weeks later Mr. H—— had one of the worst paroxysms of melancholia that he ever passed through. All the symptoms above detailed were exaggerated to the utmost, and well-marked suicidal tendencies were noted. An analysis made during that time showed only 0.01 of oxalic acid, but a decided increase in the urea. A still later analysis, after the paroxysm had passed and Mr. H—— was feeling tolerably well, showed 0.035 of oxalic acid, but a very marked increase (1.1) of uric acid. These figures evidently give no basis to the assumption of a direct connection between the excretion of oxalic acid and the nervous symptoms in this case. We evidently have here a case of general neurasthenia with hypochondriacal and melancholic paroxysms based perhaps on slight hereditary taint. That certain morbid metabolic changes were going on is shown by the urea and uric acid determinations. Nevertheless the quantities of oxalic acid, with the exception of the first analysis, kept well within the normal, though, if the microscope had been relied on, an excess would no doubt have been assumed. Let me add that for the last two years the patient has been abroad, and that, while attention is no longer paid to the oxalic acid in the urine, he has been very beneficially influenced by absence from business and the diversion of travelling. Though, at rare intervals, still slightly nervous, he has gained in weight, enjoys himself thoroughly, and considers himself a healthy man.

Mr. B——, aged twenty-six. Loss of appetite, loss of sleep, distress after meals, all sorts of rheumatoid pains, particularly in the back and in the loins, emaciation, mental depression, loss of intellectual vigor and of sexual desire, general debility. Has complained of these symptoms for several years; no syphilis, no organic lesion of any kind. (Table, Nos. 5, 6, 7, 8, 9, and 10.) The first analysis gave 0.422 oxalic acid in 1,200 c.c. This amount is manifestly too large, owing to an accident in the manipulations. The second analysis again showed 0.46 oxalic acid. This may be also too high a figure, but we will assume a very decided excess of oxalic acid, especially as the urine was very acid (5), and showed large and numerous oxalate octahedra under the microscope. Particular attention is called to the amount of urea, which in this analysis was 46.5. The patient was put on a diet that had no special reference to oxalic acid. He was permitted to eat certain kinds of farinaceous food and vegetables. In the next analysis the oxalic acid amounted to 0.063, while the urea was forty per cent., equal to four per cent. of the day's quantity. The next analysis gave only 0.012 of oxalic acid, and 3.6 per cent. of urea. A month later oxalic acid had risen again to 0.056, while urea had come down to 2.7 per cent. Four weeks later again, oxalic acid was none; urea, 2.8 per cent.; uric acid, 1.0. During all this time the condition of the patient was about the same, sometimes a little better, sometimes a little worse, but manifestly independent of the variation in the amount of oxalic acid. It was a clear case of general neurasthenia and hypochondriasis with nervous gastro-intestinal disturbances. The morbid metabolism in this case is undoubtedly to be measured by the increase in urea and uric acid, and has no relation to the oxalic acid. In this case, too, dependence on the microscope alone would have led to the assumption of an excess of oxalate, where analysis showed normal quantities.

Mr. B. C—— (Table, Nos. 11 and 12), aged fifty-two.

[1] Loc. cit., and E. Rosenberg, Quantitative Bestimmung der Oxalsäure im Harn. N. Y. Medicinische Monatsschrift, Bd. III., 1891, p. 484.

Neurasthenia of many years' standing, without any organic lesion. Shows symptoms more especially of cerebral and spinal neurasthenia, vertigo, pains in limbs, pains in back, loss of sexual power, muscular weakness, together with gastro-intestinal symptoms, such as loss of appetite, distress after eating, diarrhœa alternating with constipation, etc. His diet consists principally of meat and milk food, and small quantities of farinaceous substances. The first analysis gave no oxalic acid, but indican abnormally increased, the second analysis, 0.03 of oxalic acid.

Mr. St—— (Table, No. 13). Neurasthenia mainly of cerebral type. Frequent headaches. Intellectual apathy, impairment of memory, great mental depression. No evidence whatsoever of organic disease. One analysis, specific gravity, 1.024, strongly acid (4.8). Microscope shows urates and oxalates. Urea, 2.8 per cent.; uric acid, 1.7; oxalic acid, 0.06.

Dr. T—— (Table, No. 14), aged forty-seven. Organically perfectly sound. Periodic melancholia of very severe type. The attacks sometimes last many months, during which the patient is tortured by almost irresistible suicidal impulses. In this condition, insomnia, general debility, loss of appetite, and emaciation. One analysis,

Number.	Name, disease, etc.	Date.	Quantity of urine in 24 hours.	Specific gravity.	Reaction and acidity.	Microscopic examination.	Urea.	Uric acid.	Relation of uric acid to urea.	Oxalic acid.	Phosphoric acid.	Chlorides.	Albumin.	Sugar.	Remarks.
1	Mr. N. H., age 63 years; melancholia, etc.	Sept. 30, 1889.	900	1.024	Acid	Urates and triple phosphates.	30 = 3			0.135					
2	Mr. N. H., age 63 years; melancholia, etc.	Jan. 15, 1890.	1,200	1.024	Acid, 2.5	Oxalate octahedra numerous.	30 = 2.5 %	0.6	1 : 50	0.030					
3	Mr. N. H., age 63 years; melancholia, etc.	March 5, 1890.	1,000	1.028	Strongly acid, 3.15.	Negative	35 = 3.5 %	0.5	1 : 70	0.010					Indican.
4	Mr. N. H., age 63 years; melancholia, etc.	April 5, 1890.	1,250	1.022	Very acid, 3.9.	Oxalate crystals	32.5 = 2.6 %	1.1	1 : 29⅔	0.035					
5	Mr. B., age 26 years; neurasthenia.	Sept. 30, 1889.	1,200	1.021	Acid	No sediment	26.4 = 2.2 %			0.422					
6	Mr. B., age 26 years; neurasthenia.	Oct. 14, 1889.	1,370	1.028	Very acid, 5	Large and numerous oxalate crystals.	47.5 = 3.4 %	0.7	1 : 66	0.46					
7	Mr. B., age 26 years; neurasthenia.	Nov. 4, 1889.	1,000	1.030	Acid, 2.89	Oxalate crystals	40 = 4 %			0.063					
8	Mr. B., age 26 years; neurasthenia.	Nov. 27, 1889.	1,200	1.026	Very acid. 3		43.2 = 3.6 %			0.012					
9	Mr. B., age 26 years; neurasthenia.	Dec. 20, 1889.	1,200	1.027	Acid		32.4 = 2.7 %	0.48	1 : 67	0.056					
10	Mr. B., age 26 years; neurasthenia.	Jan. 17, 1890.	1,450	1.026	Acid, 2.9	No sediment	40 = 2.8 %	1.0	1 : 40	None.					
11	Mr. B. C., age 52 years; neurasthenia.	Nov. 6, 1889.	900	1.020	Acid, 2.5	Uric acid crystals.	19.8 = 2.2 %	0.33	1 : 59.4	None.					Indican increased.
12	Mr. B. C., age 52 years; neurasthenia.	Sept. 16, 1889.	1,190	1.020	Slightly acid.	Urates; no oxalates	32 = 2.7 %			0.03					
13	Mr. S., age 25 years; neurasthenia.	Feb. 11, 1890.	2,400	1.024	Strongly acid, 4.8.	Urates; a few oxalates.	67.2 = 2.8 %	1.7	1 : 39	0.06					
14	Dr. T., age 47 years; melancholia.	Feb 19, 1891.	1,350	1.020	Acid, 3		40.5 = 3 %	0.3	1 : 135	0.017	2.0	9.9			
15	Mrs. R. M., age 28 years; anæmia; neurasthenia.	Dec 16, 1889.	750	1.030	Acid	Oxalate crystals, few and small.	21 = 2.8 %	0.4	1 : 52.5	0.011					
16	Mr. O. T., age 32 years: neurasthenia; hypochondriasis.	Nov. 14, 1892.	1,260	1.023	Strongly acid, 3.8.	Uric acid crystals.	35.3	0.25		0.008	2.7	10.7			
17	Mr. M. A. J., age 48 years; tabes dorsalis.	Jan. 27, 1892.	820	1.026	Slightly acid, 1.8.	Small oxalate crystals.	24 = 3 %	0.59	1 : 40	0.016					
18	Mrs. G. M., age 60 years; gouty diathesis.	Dec. 7, 1889.	1,465	1.021	Strongly acid, 4	Uric acid crystals.	35 = 2.4 %	1.3	1 : 27	0.015					
19	Mrs. G. M., age 60 years; gouty diathesis.	Oct. 5, 1890.	1,600	1.019	Acid			0.8		0.017					
20	Mrs. G. M., age 60 years; gouty diathesis.	April 10, 1890.	1,550	1.022	Acid	Uric acid crystals.	46.5 = 3 %	2.3	1 : 20	0.019					
21	K., German Hospital; typhoid fever.	Nov. 6, 1889.	1,400	1.024	Acid. 3.7	Hardly sediment.	53.2 = 3.8 %	1.8	1 : 29.5	Only trace.					Indican increased.
22	K., German Hospital; typhoid fever.	Nov. 15, 1889.	1,200	1.018	Slightly acid, 2.5	No oxalate crystals.	30 = 2.5 %	1.33	1 : 22.5	0.012					
23	K. (male). German Hospital; phthisis pulmon.	Nov. 29, 1889.	950	1.021	Slightly acid, 1.8		22 = 2.3 %	0.52	1 : 41.5	0.019					
24	W. (female), German Hospital; phthisis pulmon.	Feb. 9, 1890.	900	1.018	Acid, 1.35		18.9 = 2.1 %			0.028					
25	W. (female). age 12 years, German Hospital; pleuro-pneumonia; endocarditis.	March 12, 1890.	600	1.026	Acid		18 = 3 %	0.54	1 : 33	0.025				Trace.	
26	N., German Hospital; carcinoma hepatis.	Feb. 20, 1890.	1,550	1.014	Acid. 2.5		24.8 = 1.6 %	0.9	1 : 27.5	0.007					
27	Mr. A., age 72 years; carcinoma flexuræ sigmoideæ.	March 13, 1890.	1,170	1.022	Strongly acid		35 = 3 %			0.80					Indican increased.
28	E. (female), German Hospital; cat. gastric. chron.	March 3, 1890.	1,150	1.011	Slightly acid, 0.36.	No crystals	14.9 = 1.3 %	Mere trace.		None.			Trace.		
29	Mrs. J. E. A., age 38 years; healthy. occasional renal colic.	Jan. 4, 1890.	1,600	1.016	Acid	Negative	35.2 = 2.2 %	0.29	1 : 120	Mere trace.					
30	Mrs. W., age 85 years; cystitis; pyelitis.	Nov. 6, 1889.	1,250	1.010	Neutral	Pus; no crystals.	17.5 = 1.4 %			None.			Present.		
31	Mr. H. A. S., age 35 years; healthy, urethritis.	Oct. 6, 1890.	1,775	1.019	Neutral		50	1.3	1 : 38	0.001	2.5				
32	Mr. H. A. S., age 35 years; healthy, urethritis.	Oct. 13, 1890.	1,400	1.030	Acid, 3.4	No crystals	42 = 3 %	1.4	1 : 30	0.021	2.1	14.7			
33	Mr. H. A. S., age 35 years; healthy, urethritis.	Dec. 1, 1890.	1,500	1,028	Acid. 2.5	No crystals	31.5	2.9	1 : 10.8	0.0075	2.0	13.0			
34	Mr. O. M., age 45 years; cat. intest chron.	Oct. 20, 1880.	1,200	1.022	Acid, 3.75	Uric acid crystals.	43.2 = 3.6 %	1.5	1 : 28.8	0.080					Indican increased.
35	Mr. O. M., age 45 years; cat. intest chron	Dec. 2, 1889.	1,150	1.020	Acid		33 = 2.6 %			0.060					No indican.
36	Dr. K., age 45 years; renal hemorrhage occasionally.	Oct. 28, 1890.	2,000	1.022	Acid, 1.4	Phosphate crystals.	48 = 2.4 %	Trace.		0.020	2.8				

during acme of a paroxysm. Urine strongly acid (0.3), three per cent. of urea, only 0.3 uric acid, and 0.017 oxalic acid.

Mrs. R. M——, aged twenty-eight (Table, No. 15). General anæmia with well-marked hysterical tendencies; no organic lesion. Microscope shows small oxalate crystals; oxalic acid, 0.011.

Mr. O. T——, aged thirty-two (Table, No. 16). Nervous dyspepsia and diarrhœa; well-marked agoraphobia; rapid emaciation; no organic lesion; mixed diet; acidity, 3.8; urea, 35.3 per cent.; oxalic acid, 0.008.

Mr. M. A. J——, aged forty-nine (Table, No. 17). Tabes dorsalis of ten years' standing, with frequent gastric crises: acidity, 1.8; urea, three per cent.; uric acid, 0.59. Microscope shows numerous small oxalate octahedra. Oxalic acid, 0.016.

In all these cases it is shown that the oxalic acid, whether increased, whether within normal limits, or even if diminished, had no demonstrable influence on the course of the disease, and that emaciation or other metabolic disturbances can be accounted for by tissue waste as measured by the excretion of urea and uric acid.

Besides these cases of nervous disturbance, analyses were obtained of the urine of perfectly healthy persons, as well as of such suffering from various acute and chronic diseases, with the view of studying oxalic-acid excretion under varied conditions. I will not enter upon all of them in detail, as they can be found in the annexed table. I will single out only a few of the more important ones. As much has been said concerning the relations of oxaluria to gout, it will be interesting to note the case of Mrs. G. M——, aged sixty (Table, Nos. 18, 19, and 20), a very corpulent lady, with well-marked gouty diathesis. During the year in which the analyses were obtained, her diet consisted of a limited quantity of meat, small quantities of amylaceous food, no sweets, no pastry, a moderate amount of vegetables and fruit, and alkaline drinks. She took also a nightly dose of rhubarb, according to her custom for many years. The analyses show a marked increase in the quantity of uric acid, but only very small quantities of oxalic acid (0.015, 0.017, 0.019), certainly referable in this case only to oxalic acid ingested with food and rhubarb.

Two analyses from a hospital case of typhoid fever (Table, Nos. 21 and 22), the first at a time when the temperatures were decreasing, but before they had reached the normal; the second during convalescence. The diet at the time of the first analysis consisted only of milk and gruel. The oxalic acid was none, but a marked increase of uric acid and urea appeared. At the time of the second analysis the diet was somewhat more liberal, as the fever had meanwhile disappeared. Oxalic acid, 0.012, and a decrease both in uric acid and urea.

Two cases of phthisis pulmonum, one male, one female, both with moderate fever (Table, Nos. 23 and 24). In one oxalic acid, 0.019; in the other, 0.028. These figures are in marked opposition to the theory which derives oxalic acid from incomplete oxidation, and confirm the results already obtained by Fürbringer and others.

A case of a child, twelve years of age, suffering from pleuro-pneumonia and valvular disease of the heart (Table, No. 25). Analysis was made at a time when febrile symptoms had disappeared and the little patient had begun to eat solids. He was, however, still distinctly cyanotic. Oxalic acid, 0.025, a result which tends to confirm the statements made in the preceding case.

A case of a woman suffering from chronic gastric catarrh with hyperacidity, on absolutely liquid diet (Table, No. 28). Oxalic acid, none.

Cancer of the liver (Table, No 26). Moderate cachexia and very little appetite. Oxalic acid, 0.007.

Mr. A——, aged seventy two (Table, No. 27). Cancer of sigmoid flexure; anus præternaturalis; cachexia. Principally milk diet, but eats some farinaceous and vegetable food; increase of urea (three per cent.) and of indican; oxalic acid, 0.018.

Mr. H. A——, aged thirty five (Table, Nos. 31, 32, and 33). Strong and healthy man; has old chronic urethritis and prostatitis, in consequence of which from time to time gritty white masses, consisting principally of urates, are discharged at the beginning of micturition. The analyses were made chiefly with a view of determining whether the local lesions favored a precipitate of oxalate. The uric acid was found very markedly increased, the oxalic acid, if anything, rather subnormal (0.001, 0.021, 0.0075).

Mrs. W——, aged eighty-five (Table, No. 30). Chronic cystitis and pyelitis; lives almost exclusively on bread, milk, and meat; urine neutral, contains pus. No oxalic acid.

I am well aware that these observations are too few in number, and too defective in many respects, to serve as a basis for definite and authoritative general conclusions. The subject is an intensely difficult one, and our knowledge of even its elementary chemical and physiological bearings still very uncertain. Only long-continued and patient analytical and experimental work can ultimately furnish the data for a future physiology and pathology of oxalic acid in the human organism. While not pretending to solve any of the problems connected with this subject, it seems to me, nevertheless, that from the foregoing analyses and observations, as well as from the work of other observers and experimenters, the following conclusions may be provisionally deduced:

1. Oxalic acid is a normal, though possibly not a constant, constituent of the urine.

2. The amount present in a given quantity of urine can be determined with any degree of reliability only by quantitative analysis. All approximations by means of microscopic examination are untrustworthy.

3. The chief source of oxalic acid in the urine is the oxalic acid contained in the food, though it is probable that minute quantities are produced in the course of normal metabolism. Further investigation will have to demonstrate if, and under what conditions, morbid metabolism affects the production of oxalic acid.

4. Impeded respiration, diseases of the heart and lungs, do not of themselves tend to produce an excess of oxalic acid in the urine.

5. The establishment of pathological oxaluria as a type of disease *sui generis* is not warranted by the facts at present at our command.

6. The nerve symptoms assumed as characteristic of pathological oxaluria are not caused by an excess of oxalic acid in the blood and in the urine. Analysis will show that such excess is by no means as frequent as has often been assumed.

7. Where such excess does occur not to be accounted for by ingesta, it is probably one of several symptoms of metabolic alterations primarily caused by disturbances of the nervous or digestive organs, or both, but no factor in the causation of disease.

8. In considering the excretion of oxalic acid in the urine it is of the utmost importance to take into account at the same time the excretion of the other principal constituents, particularly urea and uric acid.

Period of Incubation of Chicken pox.—Dr. John J. Eyre writes to the *British Medical Journal* that November 18th Mrs. M., residing at Hampstead, accompanied by her little boy, visited a married sister living at Streatham. They stayed at Mrs. O.'s house about three hours. Soon after they left Mrs. O. found that one of her children had red pimples on the body. The doctor who saw the child next day discovered that she was suffering from chicken-pox. Mrs. M.'s child was taken ill with the disease on December 2d, and the rash appeared on December 3d. The writer regards the case, though it is an isolated one, as worthy of record, because, first, it enables us to definitely declare the period of incubation to be fourteen days; and, secondly, it proves that chicken-pox is infectious directly the rash appears.

HYPERPLASTIC SALPINGITIS AND ITS OPERATIVE TREATMENT BY DRAINAGE.[1]

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Suppurative inflammation of the Fallopian tubes was, until the beginning of the last decade, not studied in its details either as to etiology or as to pathological anatomy. The typical pyosalpinx—a closed, dilated tube filled with pus, effecting rupture into the peritoneal cavity, and peritonitis, or extension to the surrounding organs, and local pelvic inflammation, with or without abscess formation—was then regarded as a common form of the disease.

A. Martin first called attention to the fact that in some cases of salpingitis there was no dilated tube filled with pus, but a thickened wall surrounding a normal or narrow lumen in which only a slight amount of secretion was contained. We owe to Martin, to a great extent, (through work by himself and his pupils) the detailed knowledge of to-day of the pathological anatomy of suppurative salpingitis. Kaltenbach, in 1885, described a case of gonorrhœal salpingitis, with stenosis of the canal and consecutive hypertrophy of the muscularis. The patient had suffered from attacks of excruciating pain preceding menstruation; she would roll on the floor and cry out loud, would scream like a maniac. The right extirpated tube was as thick as a finger, and rigid, the fimbriated end was closed, and the narrow canal contained only a little blood. The thickness of the wall was due to an enormous hypertrophy of the muscular coat. Kaltenbach explained this muscular hyperplasia as a result of overwork of the muscular coat of the tube in trying to evacuate the contents into the uterus through the stenosed portion of the tube. Kaltenbach had expected to find a typical pyosalpinx, and was surprised to find no dilatation of the lumen of the tube.

Orthmann, in an excellent paper on the pathology of the tubes, using the material from A. Martin's private clinics, and A. Martin, in a paper read in Berlin, in 1886, state that thickening of the wall of the tube is commonly found in chronic salpingitis and is due to a diffused granulated infiltration of the whole wall of the tube; rarely to hypertrophy of the muscular coat.

From an anatomical point of view Martin made a distinction between catarrhal, interstitial, and follicular salpingitis.

In endosalpingitis catarrhalis, the mucous membrane is thickened by small-celled infiltration below the undestroyed epithelium.

In interstitial salpingitis, the whole wall is the seat of the infiltration, the tube is hard and stiff, and thick as a lead-pencil or a finger.

In follicular salpingitis, the tube is elongated, tortuous, not dilated, and contains a small amount of mostly serous, often bloody, fluid. The wall of the tube is thickened sometimes to one and a half or two centimetres, is rigid, and does not collapse when the tube is cut across. The thickening of the tube is due to small-celled infiltration and young connective tissue that separates the muscle bundles and contains dilated vessels which are either empty or filled with blood, sometimes to such an extent as to rupture and cause small ecchymoses. In the wall are also to be found small abscesses and cystic spaces. A plastic peritonitis unites the tube with all its surroundings, intestines, uterus, and walls of pelvis, and makes the convolutions of the contorted tube adhere to each other so as to form a tubal tumor, as it is often termed. This tumor is from the size of a hen's egg to that of a fist, and consists of the convolutions of the diseased tube united into one mass, in which the canal runs as a labyrinth which is hard to unravel even on a careful post-mortem dissection. The lumen may be locally narrowed so as to admit only a hair and may be surrounded by dilated round spaces.

I will first describe a typical case of this kind, treated in the usual manner by extirpation:

Case I. *Synopsis.*—Gonorrhœal infection eleven years ago; symptoms of salpingitis over ten years ago, increasing in severity; considerable aggravation for the last year and a half. Extirpation of the left tubal tumor by laparotomy; recovery.

History.—Mrs. A. F. A——, of Chicago, twenty-nine years of age, married, does her own housework. She has been married nine years, has no children, and has had no miscarriages. Menstruation commenced at the age of thirteen and was regular till sixteen, when it disappeared for a time after bathing in the lake. During this time she had diphtheria and was sick in bed for five weeks. At the age of eighteen she was exposed to gonorrhœal infection and a purulent discharge from the vagina followed, which remained for years. An attack of typhoid fever was followed by weakness for one year. After her marriage, at twenty, menstruation became copious and was accompanied by intense pain in the back and hips. One year and a half before her marriage, while lifting a heavy trunk, she felt a sudden pain in the left inguinal region, followed by chills and fever, confining her to bed for two months. After this there would be some pain in the left lower abdomen now and then, sometimes extending over to the right side, and she never since has regained her full health. During the last ten years the pain would occasionally increase so as to force her to stay in bed for some days about once every two months. In the fall of 1890 a more severe attack of pelvic cellulitis came on, with chills and fever, pain, tenderness, swelling of the lower part of the abdomen, and frequent painful micturition. She was in bed for six weeks, but remained disabled from persisting pains, weakness, and nervousness. In May, 1891, a similar attack kept her in bed for two weeks. Her family physician, Dr. Otto, of Chicago, finding a tumor to the left of the uterus, sent her to me for operation in June, 1891.

On examination I found the patient somewhat pale, moderately well nourished, with the organs of the thorax and upper abdomen normal. No fever. There was pain in the pelvis minor, chiefly on the left side, aggravated by walking or being on the feet much, which incapacitated her for domestic work.

Examination of the abdomen revealed tenderness above the symphysis, most pronounced to the left, where a tumor was felt. Vaginal examination showed the uterus displaced somewhat to the right by a tumor the size of an orange: it was even on the surface, hard, not fluctuating anywhere, located in the left broad ligament high up and connected with the left side of the uterus, so as to permit of only slight mobility between them. There had never been any discharge of pus from the rectum, and rectal examination showed no softer points on the posterior surface of the tumor. Puncture by a fine aspirator needle through the vagina brought from high up, about a teaspoonful of pus, and was followed by fever for twenty-four hours.

The diagnosis was pyosalpinx gonorrhœica buried in pelvic exudate, and extirpation, or rather exploratory abdominal section, was advised.

Operation. June 22, 1891, in the Emergency Hospital.—A median incision was made from the symphysis to near the umbilicus, and a transverse division of the rectus muscle was made low down. I found a tumor the size of an orange, covered with omentum, after detachment of which, enucleation was effected with some difficulty by the fingers. The tumor finally came out as a mass, no pedicle was found, and a number of vessels had to be ligated subsequently. The right ovary and tube were found to be apparently healthy, and were not removed. It was impossible to cover the rather extensive bed from which the tumor was enucleated, with folds of peritoneum from

[1] Read by title at the International Gynecological Congress, at Brussels, September, 1892.

the broad ligaments; therefore drainage with iodoform gauze surrounding a glass tube was employed.

For three days after the operation there was slight elevation of temperature to 101.5° F. and some vomiting,

Fig. 1.

but at the end of the third day the symptoms subsided. The day following the operation the patient asked for beer, which she kept down, and she took from one to three pints of beer a day during the first week, while milk, tea, and other liquids were vomited up. The glass drain

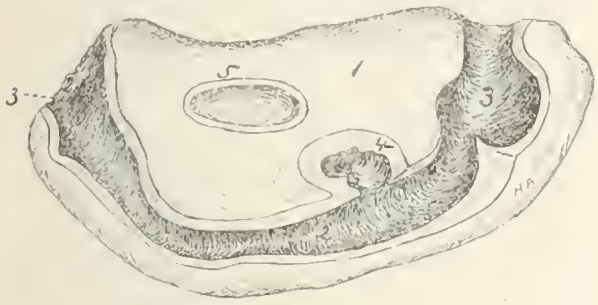

Fig. 2.

was removed on the fourth day, and the gauze drain on the twelfth day, and she left the hospital five weeks after the operation.

Her present condition now, one year later, is perfectly satisfactory, as shown by an examination on August 19, 1892. She gained some twenty pounds in weight in the two months succeeding the operation, and has retained

Fig. 3.

that weight since. Menstruation reappeared in the third month, and has been regular and painless ever since. Sometimes she feels slight pains low down in the pelvis, but these are only transitory. She can be on her feet all day and do her housework, except the washing. Cohabitation is only occasionally accompanied by slight pain, and in general she thinks that her health is better now than it was even before her marriage.

Description of Specimens.—Microscopic appearances, *vide* Figs. 1 and 2. The extirpated tube forms a globu-

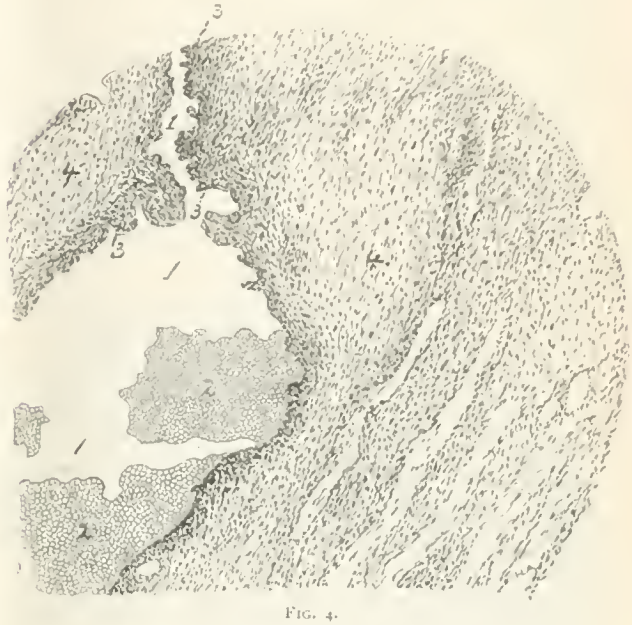

Fig. 4.

lar tumor the size of an orange, one side convex, the other more flattened. On the convex side and along the borders are seen longitudinal ridges the thickness of a finger, forming a bas-relief on the surface, running in curves interwoven with one another. These are the convolutions of the elongated, thickened, and contracted tube, which have been united by connective tissue into one

Fig. 5.

globular tumor. Incision along the top of the ridges shows the thickened wall of the tube, and leads into the open, not much dilated, canal that remains patulous when opened into longitudinally or divided transversely, on account of the rigid condition of the thickened wall. The canal contains a slight amount, less than a teaspoonful, of pus or muco-pus. The tumor is not of uniform calibre but with round spaces alternating with narrower spaces, especially on the convexity of the curves of the convolutions. The abdominal end of the tube is closed and

buried in the mass of the tumor. The ovary I could not find. The uterine portion of the tube is dilated and presents as a round opening on the flat surface of the tumor, where it has been torn across during the enucleation. The thickness of the wall of the tube varies from 3 mm. to 1.5 cm.

Microscopical Examination (Figs. 3, 4, 5, and 6) — The peritoneal portion shows thickened peritoneum in the shape of a layer of old fibrillary connective tissue. Below this, in the subperitoneal tissue, are numerous lymph spaces partly filled with, but all of them surrounded by, a layer of granulation cells or lymphoid cells. This shows a chronic subperitoneal lymphangitis. After this comes a layer of young connective tissue, rich in cells, with thickened vessels and small-celled infiltration in many of the perivascular spaces (chronic periphlebitis). Below this

Fig. 6.

thickened peritoneum and subperitoneal tissue the muscularis is seen. It is not particularly hypertrophic, neither are the muscular bundles separated by layers of young connective tissue to any appreciable extent. In the wall inside of the muscularis is an irregular cavity, *vide* Fig. 2, filled with pus or mucous matter, as seen in the coagulum adherent to its wall. The wall consists of a layer of embryonal tissue with the cells so numerous as to permit almost no stroma to be seen between them. I am uncertain whether this cavity is an abscess in the wall of the tube, or an occluded space of the irregular lateral sinuosities of the lumen, on the mucosa of which the epithelium has been destroyed. Both of these conditions—miliary abscess and occluded spaces—are found in the walls of such tubes (Martin). The submucosa is the next stratum, and consists of a very thick uniform mass of young connective tissue with spindle-shaped cells. It is rich in small and large vessels, the walls of which, arteries as well as veins, are thickened. The vessels are not dilated, but in a number of perivascular spaces are seen groups of leucocytes, showing that inflammation is going on, or at least a formative process tending to increase of the hyperplasia of the wall. The inner and last layer is the mucous membrane, or what is left of it. The epithelium has disappeared and the mucosa appears like a heavy layer of embryonal tissue packed with leucocytes or lymphoid cells. A considerable number of large, thin-walled vessels, probably dilated capillaries, filled or distended with blood, give the tissue an almost angiomatous appearance. In some places the dilated vessels have ruptured, and islands of extravasated blood are found. Between the dilated and filled vessels numerous empty capillaries are also seen. There is an enormous vascularity in this innermost layer of the tubal wall.

This specimen represents an average form of chronic salpingitis. The whole wall of the tube is thickened in the majority of cases. Orthmann found it to be so in all of his eight cases of "salpingitis purulenta." But he also found it in at least eight of his nine cases of "salpingitis catarrhalis." Looking carefully over the detailed description of Orthmann's nine cases of salpingitis catarrhalis and the following eight cases of salpingitis purulenta, I am unable to see any difference in the anatomy of the diseased tubes, and I do not understand how he differentiates between the two forms. In both classes of cases we find the thickened tube either straight and not elongated, or elongated and convoluted, the convolutions uniting to form a tubal tumor.

A. Freund has probably given the best explanation of the fact that the tube in some cases takes on the straight and in others the convoluted form. In his beautiful investigations of the development of the Fallopian tubes in intra-uterine and after-life he found not infrequently an arrest of development on one or both sides in adult females. He found the tube as follows: A short, narrow, uterine portion, followed by two to four convolutions, which were sometimes spirally contorted so as to form a number of multiple loops, like the old post horn. This is the shape of the tube normally found in the fœtus and newborn child, and when found in the adult signifies that the tube has been arrested at an early stage of development as far as the change in shape is concerned. Freund points out that a tube of this shape is less liable to empty its contents than a normal straight one. This condition consequently predisposes to retention of secretion, and makes the tube, when injected with gonococci or pus microbes, less apt to pass through an attack of inflammation spontaneously.[1]

It is natural to suppose that a tube of the shape described by Freund, when infected, would easily be transformed into a tubal tumor, as was the one described in my case.

N. Savinoff has described a well-marked case of a thickened non-contorted tube. He names the disease "salpingitis chronica productiva vegetans." This name, although somewhat long, is a correct one, but it does not apply to a singular or rare form of salpingitis, as his case does not differ from the common chronic salpingitis as described by Martin, Kaltenbach, Orthmann, Cornil and Terrillon (salpingitis purulenta), Gottschalk, and others. Boldt, in a short and excellent paper on the pathology of the tubes, uses the term interstitial salpingitis, as first proposed by Martin. Orthmann attempts to make a rigid distinction between salpingitis purulenta and pyosalpinx. The pyosalpinx is a dilated tube filled with pus, and requires for its existence closure of the ostium abdominæ or a stenosis somewhere in the canal. He regards pyosalpinx as the first stage of a purulent salpingitis where the mucous membrane is destroyed by pressure and the remainder of the tubal wall thickened. I have extirpated more than once a typical pyosalpinx where the epithelium was well preserved and the wall of the dilated tube little if at all thickened.

It seems to make little if any difference whether the pyosalpinx is due to infection with the gonococcus or with the pus microbe. In Orthmann's eight cases of salpingitis purulenta the origin was found to be gonorrhœa in three cases and puerperal infection in three cases, and there was no particular difference in the pathological anatomy of these tubes.

In the treatment of salpingitis it must be borne in mind that the majority of cases recover under conservative measures—rest, antiphlogosis, and so on. Martin states that in his series of 287 cases, over four-fifths recovered without operation. But the minority of obstinate cases that have proved refractory to conservative treatment, require operation.

Abdominal extirpation of the diseased tube, as inaugurated by Lawson Tait, is to-day in the hands of the profession all over the world. The removal of a pyosalpinx or a tubal tumor is sometimes easy, but often

[1] Freund's tables, Figs. 14 to 18.

difficult, and in some cases absolutely impossible. The difficulty and consequent danger depend mainly upon the relation between the tube and the intestines. Adhesions to the sigmoid flexure or to loops of small intestine may be so extensive as to render it impossible to loosen the intestine without rupture of its wall. Perforation of the pus cavity into the bowel and a communication between them, characterized by periodical evacuation of pus through the rectum, is another danger, and is, in my opinion, so grave as to contraindicate abdominal extirpation. It is probably more often a peritubal abscess than a perforated dilated tube that opens into the bowel.

A peritubal abscess, with the thickened tube adherent to or embedded in its wall, has been removed *in toto* with the diseased tube, in a number of Martin's cases.[1] Martin says that verhängnissvoll, the cases with extensive intestinal adhesions or perforation into the intestine, are severe or difficult. In 3 out of 12 deaths from a series of 61 operations this complication was found. Martin regards the danger of infecting the peritoneal cavity with pus from a tube ruptured during extirpation, as less than the danger from extensive adhesions to the intestines. Leopold, who in 1886 operated on 5 cases, with 3 deaths, met with a case where after the removal of the right appendages he found it impossible to remove those on the left side. He fears, besides the infection from the tube, hemorrhage from the severed adhesions. Martin, at the Congress in Copenhagen, stated that he had met with cases where extirpation was impossible, and considered the operation more grave than the removal of ovarian tumors.

It is of little practical value to consider the mortality of removal of diseased tubes by laparotomy, because of the above-mentioned difference in the cases.

Westermark gives a mortality of eight per cent. from 489 operations reported by eight operators. Gusserow had 1 death in 31 cases; Wylie 2 deaths in 14 cases, both of which were in a series of 8 cases of pyosalpinx; Rosthorn 2 deaths in 40 cases—the cause of death in both cases was overlooked injuries to the intestine during the extirpation; Martin had 12 deaths in 61 operations, in 3 of which, as above stated, intestinal complications were present; Boldt 8 deaths in 112 cases; Kümmel 1 death in 10 cases; Pozzi 1 death in 26 cases; Keith no deaths in 33 cases; Leopold 3 deaths in 5 cases.

It is easily seen that the mortality varies with the character of the cases operated upon, and that the most skilful operator will have a higher mortality when he happens to meet the more severe cases, and when removal is effected in spite of the difficulties in the given case. To draw the line where removal should be abandoned as too dangerous, is a clinical problem for which no rule can be laid down.

What can be done or has been done in the cases that have been abandoned as impossible? Martin advises that the opened sac be closed after drainage is established down into the vagina. This method of operating is applicable only to the cases where a pus-containing cavity, dilated tube, or abscess, exists. As above stated, there is no such cavity in many cases. Drainage of the tube through an opening in the vagina is proposed by Mundé as the primary operation to be attempted when the tube is accessible from below. Mundé states as follows: "I have had a number of these cases and by persistence and perseverance have succeeded in curing them, although the drainage-tube had to be worn for a number of months."

This operation is applicable only to cases where a cavity filled with pus is present. It will be impossible to enter from the vagina the comparatively narrow canal of a tubal tumor in a hyperplastic salpingitis.

Drainage of a non dilated tube can be obtained from the abdomen with beneficial results, as is shown in the following case:

Case II. *Synopsis*—Gonorrhœal infection two years ago: nine months ago increase in endometritis: seven months ago pelvic cellulitis terminating in abscess, aspiration through the vagina; three months ago opening of abscess into the bowel: periodical evacuation of pus per anum; abscess inaccessible from the vagina. Laparotomy: no pus found: operation in two tempos; opening and drainage of the non-dilated tube: recovery.

History.—Mrs. A. W——, of Sheboygan, Wis., entered the German Hospital, November 12, 1891. She is twenty-eight years of age, married eight years. No hereditary disease in her family; both parents are alive; she has ten brothers and sisters, all in good health. As a child she had measles and scarlatina, otherwise she was always healthy. Menstruation commenced at the age of fifteen, was always regular. She was married when nineteen years of age, has three healthy children—seven, six, and three years of age. Her husband had gonorrhœa two years ago, and transmitted it to his wife, who suffered from the usual symptoms of an acute attack of the disease. Nine months ago, in February, 1891, there came on an increased purulent discharge from the vagina. It would lessen after menstruation, which continued to be regular as to time and quantity, and was never accompanied by any unusual amount of pain. Seven months ago, in April, 1891, she was taken with chills, fever, and pain in the left hypogastric region, and had to go to bed. Three days later a profuse discharge of pus from the vagina came on, as she states, suddenly, and then the fever decreased somewhat, but the pain and tenderness forced her to stay in bed. After a few weeks the fever again increased, she became emaciated, and the lower part of the abdomen became swollen and hard. About the end of May, a physician opened an abscess through the vagina, without an anæsthetic, and evacuated over one quart of pus mixed with blood. Toward the end of June she got out of bed and was around for about two weeks. The pain, however, returned and made her go to bed for days at a time off and on. The growth in the lower abdomen had disappeared when the abscess was opened, but when the pain returned she again felt a tumor in the left hypogastrium, smaller at first, but later increasing in size to that of a cocoa-nut. In August, 1891, she began to notice periodical evacuations of pus through the rectum, followed by a decrease in the pain and in the size of the tumor. In September and October she passed most of the time in bed. The abscess would discharge through the bowel two or three times a week. The swelling increased to the size of a child's head and the pain became more intense toward the end of two or three days, then during the night the pain would disappear, the swelling decrease, and in the following evacuation of the bowels a noticeable quantity of pus could always be found. She never noticed any difference in the fever at such times. This condition continued till the time I first saw her.

Present Condition.—She is rather emaciated, the muscles of the extremities being flabby; face pale, pulse 100: temperature, 99° F., in the evening, normal in the morning. Heart and lungs normal. The urine contains no albumen nor sugar. Examination of the abdomen reveals a tumor in the left hypogastric region, which extends from the symphysis pubis upward for three inches, and from the median line four inches outward into the iliac region. The tumor is round, hard, apparently solid, slightly tender on pressure, and has a smooth non-nodulated surface.

Vaginal Examination.—The vaginal portion of the uterus is pushed to the right side, but is at a normal distance from the introitus. On the left side of the vaginal portion, and high up, is felt a hard, immovable mass, filling the upper portion of the small pelvis. The upper part of the neck and the body of the uterus cannot be felt as distinctly separated from the tumor, and the uterus is immovable in all directions. Bimanual palpation reveals no fluctuation or softer portions of the tumor, and immobility, or only a very indistinct mobility of the whole mass.

Rectal Examination reveals the hard, non nodulated tumor behind and to the left of the uterus, high up in Douglas's fossa. No signs of a perforation opening can be found between the rectum and the tumor, which is only

[1] Orthmann, cases 12, 15, and others.

moderately tender to pressure on its lower surface. Neither ovaries nor tubes can be felt.

Diagnosis.—Pyosalpinx on the left side, and probably an abscess in the left broad ligament communicating with the intestine above the rectum.

Plan of Operating.—I wished to drain the abscess cavity. This was inaccessible from the vagina, as it was situated high up behind the uterus; it could probably be reached from above the symphysis without opening into the peritoneal cavity. If there was a free peritoneal cavity anterior to the abscess, I wanted to open in two tempos. I did not intend to extirpate the tube at this time, on account of the communication with the bowel; but I intended to close the abscess by drainage, and then, if needed, later on, when inflammation had subsided, to remove the offending appendages. I further waited for a day when the abscess cavity might be expected to be distended by pus, in order to make it more easy to find by an aspirator syringe the place of the abscess where the opening should be made.

Operation, November 17, 1891.—First tempo: Laparotomy. Assisted by Drs. Goldspohn and Bernauer. An incision nearly five inches long was made at the left lateral border of the rectus. The free peritoneal cavity was found, and after the introduction of a sponge the parietal peritoneum was stitched to the skin.

Exploration of Tumor.—On its anterior aspect was found a bluish, transparent, thin-walled cyst, the size of a hen's egg. This was opened, and clear serous fluid evacuated; the thin cyst-wall contained vessels, and was smooth on both the outer and inner surface. A smaller cyst, the size of a hazel-nut, with transparent walls, showed through its wall a whitish precipitate that moved in the clear cyst fluid upon change in the position of the cyst. This was ligated at its base and removed. Thus I reached the surface of the solid tumor, but scarcely a square inch above the larger cyst was accessible. The remainder was covered with adherent loops of intestine as follows: Upward loops of small intestine were firmly adherent to and covered the tumor: down toward the symphysis, the sigmoid flexure was distended over the tumor from side to side, and so short and diffused were the adhesions that the intestine was immovable—almost stretched out over the tumor. The left side of the tumor was, in a similar way, covered with the upper portion of the sigmoid flexure; the remainder of the anterior aspect of the tumor was covered with adherent omentum. By separating this from around the base of the large cyst, a space of two square inches of the surface of the tumor was uncovered. The surface of the tumor was apparently solid, showing no softer places designating abscess wall; it was uneven, and showed convolutions in relief over the surface. The tumor consisted of rather hard and resistant tubal convolutions, the thickness of a finger, grown together into one mass large enough to fill the whole pelvis minor. It was impossible to distinguish the uterus or right tube and ovary in the mass.

Puncture with an aspirator syringe with long needle, in six different directions and places, gave no pus but only blood. As I was unable to find any abscess cavity, I resolved to make another attempt at the second stage of the operation in two tempos, and if no abscess cavity was reached, to open into the cavity of the tube and drain it. Stitching of the peritoneum to the surface of the tumor had to be done by loosening flaps of parietal peritoneum from the anterior abdominal wall, as the surface of the tube could not be brought readily into contact with it. I use this flap operation whenever a deep-seated surface, as for example, a small or contracted gall-bladder, has to be isolated from the general peritoneal cavity for an opening in two tempos. A surface of two square inches was prepared in this manner by stitching the peritoneal flaps to its periphery. A place on the top of the most central ridge or knuckle was marked out by a silk stitch left long, as the place where I would open into the cavity of the tube. I have found it convenient, in the operation in two stages, whether for periuterine abscess or for opening into a gall-bladder, or any other cavity or organ, to mark out the exact place for the intended incision, or, as I mostly use the opening with Paquelin's cautery-knife, by a silk suture left long. If the excluded space is small, it may be exceedingly difficult to find it at the second stage of the operation, four to eight days later, when, after removal of the iodoform gauze, the whole wound is a uniform red granulating surface, and thus the anatomical landmarks have disappeared, at any rate as far as color of the organs or tissues is concerned. The final steps consisted of union of the superfluous portions of the abdominal wound, packing with iodoform gauze in several places, hiding the guiding suture between them, and the application of an antiseptic dressing.

The operation was entirely unsatisfactory. Enucleation of the tubal tumor was hardly possible with the adherent condition of intestine described above, and was not tried on account of the communication with the intestine.[1] No pus was found, no abscess cavity or dilated tube to drain, but only the knuckles of thickened tubal convolutions were seen. It might have been preferable to do vaginal extirpation or *morcellement* of the uterus (Péan) to evacuate pus from within or around the tube.

Opening into the pyosalpinx on the seventh day, November 24th.—The patient was anæsthetized and the gauze removed from the wound. The wall of the emptied cyst formed a red granulating mass the thickness of a finger, above which was the guide suture on top of the ridge of the convolution of the tube running from the right and upward down to the left. Exploration with the syringe and long needle did not bring out pus. Incision with the Paquelin cautery-knife, three-fourths to one inch long, was made at the place of the guide suture in the direction of the tubal convolution. At a depth of six or eight millimetres was found a narrow cavity from which came a few drops of odorless, yellowish, thick mucus. A probe inserted into the opening passed upward and to the right two inches in a narrow tract, and a similar distance in the opposite direction down toward the symphysis pubis. A small rubber drainage-tube, four millimetres in diameter, was the largest that could pass, even after dilatation with a long forceps. Two drains were inserted two inches in each direction into the tube. Dry antiseptic dressing was placed over a packing of iodoform gauze.

Remarks.—I intended to drain the tube in the hope of closing the communication with the bowel; but on opening the tube, it was found that it did not communicate with the intestinal tract, as the contents were odorless. A peri-tubal abscess cavity could not be opened, because it was not found.

The after-treatment consisted only in changing the dressings and washing the wound; no washing-out through the drains was done, as they entered no cavity.

In January, after a gradual improvement locally and in general health, the patient began to sit up. The wound closed about the middle of January, 1892, eight weeks after the operation.

February 12, 1892.—The abdominal wound is closed, except a fine fistulous opening at the upper border, from which a little pus comes out once in a while. Pressure on the abdomen causes no pain whatever, and no tumor or swelling can be reached even by deep pressure on and below the promontorium. Vaginal exploration shows the uterus somewhat movable up and down, and the cervix and body can be felt to be somewhat enlarged when held between the fingers of the two hands during bimanual exploration. Rectal exploration reveals some adhesions posteriorly, but the uterus can be moved more than one-half inch. The left utero-sacral ligament is shorter and more rigid than the right, and the left half of the posterior cul-de-sac is shorter and more rigid. On account of rigidity and adhesions the ovaries and tubes cannot be felt distinctly; but I can get the fingers of the

[1] Veit: Zeitschrift f. Geb. u. Gynecol., Bd. xvi., Heft 2, p. 318, Ueber Durchbruch von Pyosalpinx nach aussen.

right hand above the symphysis, and the fingers of the left hand in the rectum and vagina, near enough together to insure that there can be no abscess or considerable tumor between them.

February 18th.—She has gained fourteen pounds in weight, walks around all day without pain and has regained her strength. The appetite is good. For the last two months there has been no evacuation of pus from the rectum and no peritoneal swelling at the seat of the tube.

Abdominal examination shows that the tumor has disappeared, so that the hand above the symphysis can pass deep down into the small pelvis without feeling any hardness or tumor.

Vaginal Examination.—The vaginal portion is in nearly normal position; the uterus is movable one inch; the right broad ligament movable and normal; the left broad ligament is thicker and less movable, and high up there is felt a nodular, hard tumor, the tube the size of a walnut; it is painless on pressure and on moving the uterus.

The patient left for her home with the advice to have the appendages removed if any symptoms in the future should call for surgical interference.

August 15th.—She is as yet in perfect health.

Conclusions.—In conclusion I will state that it is not my intention to propose drainage of an infected Fallopian tube as a substitute for its removal. When Mundé proposes to drain the Fallopian tube from the vagina as a conservative measure, to avoid the more dangerous operation of laparotomy, it is doubtful whether his cases prove that drainage of the Fallopian tube is effective or not, as it is impossible by opening through the vagina to see or know whether the tube or a peritubal abscess has been opened into. But it is possible that in some of the cases the cavity of the tube was drained; which would tend to prove that this measure is effective in abating the salpingitis as well as the surrounding pelvic inflammation. To drain a tube with the view of restoring its activity or usefulness is a measure for the advocacy of which no data as yet exist. But the case mentioned above, together with Mundé's experience, makes it probable that drainage of an infected tube may be effective in bringing the inflammation to an end. In cases of impossible or difficult extirpation, and when the tube or a peritubal cavity communicates with the intestinal canal, which latter condition is regarded by T. Veit as an absolute contra-indication for removal, I believe that drainage of the tube, if the latter be not accessible from the vagina, should be resorted to by abdominal section.

The operation in two tempos for such cases is also advocated by Winter as exceedingly safe; no pus need enter the peritoneal cavity; the tubal convolutions can be distinctly seen, and the place for opening into the tube may be marked out by a guide suture. When drainage of the tube has brought about cessation of the para-salpingitis, and closure of the abscess communicating with the bowel, and the uterus is again movable, we have more favorable conditions for extirpation of the offending tube, when this operation becomes necessary.

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A PLEA FOR EARLY OPERATION WHEN CERTAIN INTRA-ABDOMINAL DISEASES ARE SUSPECTED BUT NOT KNOWN TO EXIST.

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A COMMON saying among whist-players is "when in doubt take the trick." At the present day it would be well if every physician and surgeon bore a modification of this maxim in mind and applied it in certain lines of abdominal work.

Everyone knows and feels the uncertainties of diagnosis in many abdominal conditions.

How many accomplished clinicians, from a careful review of history, symptoms, and physical signs, have diagnosed tumors in the belly when none existed! How many able physicians have, by painstaking study and examination, apparently excluded the possibility of the presence of a tumor where subsequently an autopsy revealed one! It is well known that the most terrific inflammation may exist in the peritoneal cavity without any of the classical symptoms being observable. Many men must have been astounded—I know I have been—on opening the peritoneal cavity of a patient who has died with perhaps only abdominal distention and no other sign of abdominal trouble, to find the belly tensely filled with foul pus.

It is no doubt a very enticing thing to examine a patient day after day, noting each symptom as it arises and develops, collating all these symptoms, analyzing them, and at last making a beautiful, a delicately precise diagnosis, after the disease has, perchance, progressed to such a degree that treatment can avail nothing. Such diagnoses remind me forcibly of a very eminent and enthusiastic Scotch physician who used to dilate to his clinical class on the same patient for days in succession, explaining most thoroughly and instructively every point as it arose, and when at last the sufferer died, the physician would rub his hands together, lead his class to the post-mortem theatre, and say, with evident satisfaction, "Now, gentlemen, we will proceed to complete our diagnosis."

In cases where we know positively what ails our patient, and in cases where no reasonable suspicion arises that our diagnosis may be mistaken and that a condition may possibly exist which may be curable by operation, in such cases a careful study of every symptom up to the fatal issue, completed by a well-conducted autopsy, is of vast benefit to mankind.

On the other hand, in cases in which we suspect the presence of a trouble which may be removable by operation, but in which we have no certainty as to the facts, such a line of conduct is simply placing our fellow-men in the same position occupied by some of the lower animals in physiological and pathological laboratories.

Nowadays it ought to be considered unjustifiable for a physician or surgeon who suspects his patient to be suffering from some abdominal condition which it may possibly be within the power of surgery to palliate or cure, to neglect explaining clearly to the patient these possibilities, and that to delay until a positive diagnosis is possible, is very often to wait until the patient has his foot in the grave. An exploratory operation when per-

formed by a man who understands and practises surgical cleanliness is practically without danger, and will in most cases clear up the diagnosis. If the trouble proves to be capable of palliation or cure, the proper measures may be carried out immediately.

One very important class of the cases I refer to is appendicitis. Of course it would be out of place in a paper such as this to treat systematically of the pathology of appendicitis. Suffice it to say that one of the commonest causes of this trouble is the lodgement of a foreign body in the vermiform appendix, giving rise to acute, subacute, or chronic inflammation. In the chronic and subacute forms, adhesions form around the focus of disease, within limits increasing in extent and strength *pari passu* with the increase in the local disease. These adhesions delay the spread of the inflammation to the peritoneal cavity or protect this cavity entirely until by art or nature the abscess is evacuated externally. Frequently, if the inflammation is not severe, resolution takes place without any pus formation.

Many such cases, after an apparent cure has been obtained, recur at irregular intervals—recurrent appendicitis—and at last are operated on and cured.

The adhesions in chronic and subacute cases may be insufficient to limit the disease, and pus may, and often does, enter the peritoneal cavity, causing death.

Unfortunately at an early period in the history of a case we cannot attain any precise knowledge as to the capability of the adhesions formed to limit the spread of the inflammation, and hence, if we are treating it by the expectant method (*i.e.*, doing nothing), we may at any moment have general acute peritonitis staring us in the face—the chronic or subacute local trouble has become general and acute.

In acute appendicitis inflammation commonly spreads with extreme rapidity to the general peritoneum, no limiting adhesions being formed, and in a few hours the whole belly is the seat of a most acute peritonitis and hope is practically gone.

Unfortunately the differential diagnosis of acute from subacute and chronic appendicitis is, frequently, in the beginning of the attack, impossible, and, in fact, in early stages it is often impossible to diagnose appendicitis from many other diseases. If we let this early stage pass we run terrible risks, if we make an exploratory operation and find nothing we submit the patient merely to the slight danger of an anæsthetic and to the trivial inconvenience of from two to three weeks' confinement in bed.

To illustrate the above remarks I beg to give a short *résumé* of three cases which passed through my hands recently.

Case I.—On August 14, 1892, I was called into the country to see W. D——, aged seventeen. A few days previous to the beginning of his present illness he had eaten a large number of blackberries. Three weeks ago he felt a sudden pain in the right inguinal region. The bowels were constipated and the belly was somewhat distended. He was seen between this date and my visit by several very intelligent practitioners who examined him carefully. They found the belly distended, there being well-defined swelling as well as tenderness in the right inguinal region. Temperature, 104½° F. Rapid breathing but no dulness over the lungs anteriorly or posteriorly. No cough. No expectoration. The rapidity of respiration was explained by abdominal distention impeding the action of the diaphragm.

Status Præsens.—Young man with anxious expression, breathing with extreme rapidity and sitting up in bed supported by pillows. Frequent cough. Much prune juice-like expectoration, with vile smell. Consolidation of lower lobes of both lungs. Temperature, 104° F. Pulse, 108; respiration, 63. Belly rigid, immensely distended and tender. Evidently general peritonitis. Of course nothing could be done, and death ensued on August 16th.

This case seems to me one in which the original lesion was situated in the vermiform appendix, general peritonitis supervened, and pyæmia, with metastatic abscesses in both lungs, followed as sequelæ.

Possibly if, on the first suspicion of appendicitis, an exploratory operation had been made, the patient might have recovered; almost certainly no harm would have been done.

Case II.—On August 8, 1892, I was called to see H. F——, aged twenty.

History.—For two or three weeks he had had a feeling of malaise. On the evening of August 6th he felt some abdominal pain, for which he took some pills (nature unknown) supplied by a druggist, who thought he had a case of colic.

August 7th, between 3 and 4 A.M., Dr. Whittaker was summoned and found the patient suffering from abdominal pain. There was slight tenderness but no fulness in right inguinal region. Temperature, 102° F.; pulse, 120. Morphine was used to quiet the pain.

At 3 P.M. the belly was distended, but this went down under turpentine stupes and fomentations.

August 8th, Dr. Whittaker felt fulness in the right inguinal region. Temperature, 101° F.; pulse, rapid. Diagnosis: Appendicitis, with general peritonitis. Consulted with Dr. Daunaker, who confirmed the diagnosis. In the afternoon I was called in.

Status Præsens.—Anxious looking young man. Temperature, 103° F.; pulse, 136. Belly rigid. Rigidity most marked in the right inguinal region; there was also tenderness. He could move both legs in bed without much pain.

Chloroform narcosis. Incision in right linea semilunaris. When the peritoneum was divided much stinking pus came out. Several feet of small intestine were covered with yellow croupous membrane. The appendix was found with difficulty, small, but engorged and swollen, livid, and adherent to its surroundings.

Signs of inflammation were more acute in the neighborhood of the appendix than elsewhere. A hard body was felt in the appendix; I removed the organ after ligating, and disinfected the stump. No other lesions were found, except that the intestines, large and small, were intensely congested and somewhat distended. I sutured the upper part of the wound and stuffed the lower part with iodoform gauze, after the abdomen had been flushed with hot water, used more as a stimulant than as an attempt to get cleanliness. In spite of appropriate stimulating treatment and apparent improvement death ensued the following morning.

Examination of the removed appendix showed it to be in a state of acute inflammation, though not perforated, and the hard body, which had evidently been the exciting cause of the inflammation, was a cherry-stone. This cherry-stone must have lain in the gut for a long time, as it had become so softened that it could be broken under the finger.

Here, then, is apparently a case of subacute or chronic appendicitis which ran a course with, practically, no symptoms until from some cause an acute exacerbation was lit up and led to a rapidly fatal result. The operation *per se* had had no adverse influence on the course of the disease, but rather the reverse, as several hours after he was returned to bed his condition was better than before the operation.

Case III.—On the afternoon of December 30, 1892, I was called by Dr. Pomeroy, of this city, to see C. S. G——, a cattleman, aged twenty-five.

History.—The patient has passed through two attacks of some abdominal disease, which from his description seems to have been appendicitis. Otherwise his health has been excellent in the past. On December 26th the patient began drinking heavily and continued his spree until the small hours of the morning of December 28th, when he consulted Dr. Pomeroy. He complained of absolute constipation, which had persisted for several days, and colicky pains. The abdomen was painful, but at first this was relieved by pressure. Between this date and the time at which I saw him the temperature re-

mained between 100° and 101° F. Pulse was poor. Once the patient was slightly delirious.

Dr. Pomeroy carried out the appropriate medicinal treatment vigorously and well, but no good resulted.

Status Præsens.—Temperature, 100° F.; pulse, 117, very weak, thready, and irregular. Respiration is subclavicular in character. The tongue is furred and red at the edges. There is great thirst, but no vomiting. The belly is distended, tympanitic, and tender. The flanks are dull on percussion, this dulness changing in position slightly when the patient is turned over in bed. Tenderness is very slightly more marked over the appendix than elsewhere (no clear history of the original seat of pain could be elicited). From the right mamma down to the edge of the ribs there is absolute dulness, vocal resonance is absent, but friction-sounds can be heard. These last signs I considered due to the liver being pressed upward, and to the existence of peritonitis between the liver and diaphragm.

The patient was removed to All Saints' Hospital as soon as possible, where his condition was found to have become very much worse. The tympanites was more marked, and the temperature was 97° F.

Diagnosis.—General peritonitis, either from obstruction or appendicitis.

Prognosis.—Without operation, death certain. With operation, death almost certain.

The patient requested me to operate. Under the usual precautions an exploratory laparotomy was performed. The intestines were found distended, red and inflamed. Toward the right inguinal region they were matted together and covered with pus. I rapidly made an incision through the parietes over the vermiform appendix, and as soon as the peritoneum was incised much pus gushed out. No search was made for the appendix, but I contented myself with giving an exit to the pus. The incision in the middle line was now closed, while that over the appendix was stuffed with iodoform gauze. The operation lasted thirty minutes. Two hours and one-quarter after the completion of the operation the patient died. Post-mortem examination showed that the peritoneum was universally and acutely inflamed. Much pus was contained in the peritoneal cavity. The appendix was found tightly bound down behind the cæcum. It was four inches in length, gangrenous, perforated near its base, and contained a few grape-seeds. The whole alimentary canal from stomach to rectum was much distended with gas.

Case IV.—The fourth fatal case which I report I cannot classify more exactly than as being purulent peritonitis with double pneumonia. The origin of the trouble may have been sepsis following an abortion or appendicitis.

Mrs. F. B——, Kansas City, Mo., aged twenty-eight, mother of six children.

History.—Five weeks ago patient says she aborted when six weeks pregnant. From this abortion she was considered to have recovered, though the physician then in attendance pronounced her to be suffering from malaria.

March 1, 1893.—Dr. Phillips was called in and found the patient suffering from frequent chills. The temperature was 100° F., and pulse 90. Diarrhœa was present. There was no vaginal discharge. The abdomen was flaccid. Abdominal and vaginal examination revealed nothing.

March 8th.—Pneumonia of the lower lobe of the right lung developed, and during the succeeding three days the temperature varied from 101° to 102° F., the pulse was constant at 100 beats per minute, and the respirations were at the rate of from 34 to 40. The treatment adopted checked the diarrhœa, which had been complained of, and the abdomen began to distend on the evening of March 10th.

March 11th.—The belly was much distended and slightly tender. The right flank was slightly œdematous. Enemata containing turpentine brought away some fæces and gas, giving relief.

On the evening of March 13th I was called in consultation. The temperature was 100° F.; pulse, 120. The belly was markedly tympanitic and universally tender. Both flanks were dull on percussion, while the right was very œdematous. Vaginal examination revealed nothing worth noting. The abdominal distention caused great distress by impeding the action of the already overtaxed lungs. To relieve, if possible, this distress, but without any hope of really influencing the course of the disease, I opened the abdominal cavity one inch above the right anterior superior spine of the ilium. This I was able to do under cocaine anæsthesia (20 mm. of a four per cent. solution). Much stinking pus was evacuated, drainage was provided for, and the patient felt great relief.

March 15th.—The left lung became involved.

March 16th.—The temperature was 100½° F.; pulse, 114; and respiration, 46. The expectoration was no longer blood-stained, but thin, purulent, and marked by the same horribly offensive feculent odor as the discharge from the abdominal drain. The abdomen was lax and practically free from pain, but discharging freely through the incision.

The abdominal symptoms remained practically in this condition until death, which ensued on March 21st. No post-mortem examination could be obtained, and the cause of the fatal inflammation remains therefore doubtful.

Another class of cases in which early exploratory operations ought to be performed is where an abdominal tumor has been palpated or diagnosed but its nature not determined. Too much valuable time is often frittered away in attempts to reach differential diagnosis by reasoning, when the introduction of a couple of fingers into the abdominal cavity will almost always give positive knowledge in a few minutes. Such tumors may be of the nature of impacted fæces, dislocated or movable organs, cysts, abscesses, various forms of distention of the gall-bladder; benign or malignant neoplasms, etc. No symptoms of moment may be present except obscure pains which tend to be radiating in character.

Early is the time to operate; find out, with as much positiveness as possible, what is the matter, and do whatever is indicated for a cure to be attained or relief afforded. By thus doing, if the tumor happen to be malignant and its location justifies the step, it may be excised with some prospect of success, while if we wait until a later period secondary growths will have developed and local treatment has become useless. In cases in which the symptom of intestinal obstruction is present but little time should be lost in the attempt to get an action of the bowels by medicinal means. Taken early, before the patient has had time to become weakened, before there has been time for peritonitis to be set up (and it often arises most insidiously), an exploratory laparotomy will reveal whether the cause of obstruction is removable or not, and in the latter case much may be done by making an anastomosis between the gut above and below the obstruction.

Illustrative of these remarks I beg to give a synopsis of two cases, which are calculated to teach some most valuable lessons.

Case V.—E——, aged twenty-seven; hackman. Patient of Dr. D. R. Porter, who called me in consultation on August 16, 1892.

History.—The patient had syphilis two years ago. For a long time he was troubled with constipation. A tumor on right side of abdomen has been noticed for several weeks, and could be clearly defined a few days ago by Dr. Porter, who reports that it reached from the ribs to the iliac crest, more defined below than above.

On August 14th there was great pain in the abdomen and absolute constipation. Morphine was required to control the pain. Calomel and enemata were used without effect. Temperature and pulse have been elevated.

Status Præsens.—Fairly nourished young man of strong physique, with anxious expression. Temperature, 98½° F.; pulse, 140; respiration, normal. There is

great pain and tenderness of abdomen, most marked on right side. Resonance is obtained on percussion over the descending and transverse colon, dulness over the ascending colon. Palpation is useless because of the extreme distention and rigidity. The constipation is absolute and there is occasional vomiting. An operation was decided on.

Under chloroform narcosis an incision was made in the middle line from a point midway between the xyphoid cartilage and umbilicus to near the pubes. On incising the peritoneum much pus and fluid gushed out (about one gallon). This fluid had an intensely feculent odor. The small intestines were red, adherent, distended, and at many places covered with thick, yellowish-gray, croupous membrane. The adhesions of the loops of small intestine one to the other were rapidly separated to allow of access to the focus of disease. No perforation of the intestine was found. The ascending colon was the seat of a tumor, which was nodular, hard, but easily broken down, and it surrounded the colon. In size it was as big as two large oranges. Large masses of the tumor were shelled off. We found that nothing could be done except to make an anastomosis between a portion of the ileum and the colon at the junction of its ascending and transverse divisions.

A piece of grangrenous omentum the size of a hand was removed. I flushed the belly and sewed up the wound, providing for drainage. In spite of free stimulation with nitro-glycerine and strychnine the patient died as the dressings were being applied.

The obstructed portion of the colon was obtained. The colon, about two inches below the entrance of the small intestine was the seat of a tumor, the parts remaining being about the size of a large fist. All the mesenteric glands in the neighborhood were enlarged and agglutinated in masses. On opening the gut an annular constriction was found into which the tip of the little finger could not be passed. The internal surface of the constricted point presented the typical appearances of epithelioma, which microscopical examination proved it to be.

Had this case been operated on as soon as the tumor was observed, while no symptoms of obstruction were present and the health had not been undermined, undoubtedly an intestinal anastomosis might have prolonged life and lessened the suffering of the last act of the drama.

Case VI.—Mrs. C——, aged fifty-eight, Kansas City, Mo. Called in consultation by Dr. G. W. Lilly, October 3, 1892, 11 P.M.

Previous History.—Mitral insufficiency for twelve years, recently there has been some want of compensation, as shown by œdema of the extremities. Severe attack of typhoid fever ten years ago, with intestinal hemorrhages and great tympanites. Has had the opium habit for eight years, but how much of the drug has been taken is unknown.

History of Present Illness (supplied by Dr. Lilly).—On September 28, 1892, she complained of obstinate constipation and an uneasy feeling about the abdomen. This uneasiness soon merged into pain which increased in severity.

September 30th.—Dr. Lilly when summoned found the patient vomiting. Temperature, normal: pulse, 80, good, although slightly irregular. An enema of warm water brought away a small stool of hard, inspissated fæces with offensive smell.

October 1st.—A tumor was felt on the right side corresponding to the course of the ascending colon. This tumor was not specially tender on firm pressure. Vomiting was controlled by morphine and other suitable treatment.

October 2d.—Temperature, normal; pulse, 90, weak. Stercoraceous vomiting, which continued in spite of all treatment.

October 3d.—In the morning the temperature was normal: pulse, 95, weak, irregular. 11 P.M. I was called in consultation.

Status Præsens.—Thin, weak woman, evidently suffering much pain. Abdomen somewhat distended though no localized fulness could be made out on palpation. Absolute constipation. Uncontrollable stercoraceous vomiting. Temperature, 97½° F.; pulse, 100, weak and irregular. I agreed with Dr. Lilly in diagnosis—intestinal obstruction, and in advice—operative interference.

The patient's friends objected to immediate operation, and next morning (October 4th) called in two other physicians in consultation with Dr. Lilly. These two gentlemen agreed in the diagnosis but vetoed operation on the ground that, unless there was an elevation of temperature and marked tympanites, it was unwarrantable. They believed there was some hope of saving life and advised the use of sulphate of magnesia per os, enemata of water, and the application of the constant electrical current to the abdomen.

Of course these opinions, for the time, found favor with the relatives. As may readily be imagined, the disease pursued its course, uninfluenced by this expectant treatment, and at 10 P.M. the temperature was still subnormal. Pulse, 110, weak, soft, irregular. There was extreme pain, only controlled by morphine in heroic doses. I was again called in, only to agree with Dr. Lilly that operation would now almost certainly prove fatal. After the facts had been plainly stated to the relatives they, quite properly, decided against any attempts at relief by operation. On October 8th the patient died, and permission to open the abdomen was obtained. The small intestine was tensely distended with gas, and at a point about four inches distant from the cæcum a knuckle of gut was tightly constricted by a band of tissue which broke down under the first touch of the finger. Although this band of tissue was so fragile yet it was sufficient to cause annular marking of the two limbs of the piece of gut included, while the portion of gut between the two annular marks was gangrenous.

The lessons taught by this extremely interesting case are too self-evident to warrant any further remarks being made by me.

On such a subject as I have chosen for this paper much more might be said without exhausting it, especially could the finger be pointed to cases in which early operation has saved life. But to me it appears that a study of this subject, based on a sad series of six too late cases, appearing in the limited practice of one surgeon within the space of nine months, is timely and may, possibly, be of some value to others.

A CASE OF SKIN-GRAFTING TEN THOUSAND TWO HUNDRED FEET ABOVE SEA-LEVEL.

By J. ERNEST MEIÈRE, M.D.,

LEADVILLE, COL.,

VISITING PHYSICIAN TO ST. VINCENT'S HOSPITAL, SURGEON TO THE COLORADO MIDLAND RAILWAY.

The restoration of the integrity of the skin by the transferrence of particles of epidermis from one individual to another must always prove of interest to the surgeon, overcoming as it does deformity, restoring to the part its former usefulness, and imparting to the successful operator an intense gratification as a reward for tedious and unremitting labor. The following is the report of a case the treatment of which was complicated by serious obstacles, and this has influenced me to bring it to the attention of the medical profession. Mr. James E. M—— aged fifty years, a resident of Leadville, Col., fell from his seat on an ore-wagon, March 3, 1892, receiving an injury to the right elbow-joint. The case presented the following conditions when seen by me on the 13th of the same month: The arm was enormously swollen from the hand to the shoulder. Temperature 103° F., pulse 120; great prostration. There was destruction of the integument over the olecranon process, extending for eight by four inches toward the hand, and about a quarter of an inch in depth, involving the tissues and a small artery in its destructive process. There were two openings over

the inner condyle of the humerus, and also destruction of the integument and tissues near the axilla for about four inches, exposing vessels and bone. The arm being so swollen it was impossible to verify the diagnosis made by the two medical attendants who were in charge of the case up to the 13th, namely, of compound fracture of the inner condyle of the humerus. I made the diagnosis of phlegmonous erysipelas. Prognosis, unfavorable. Amputation of the arm, which was suggested by the friends of the patient in order to save his life, was out of the question, the only hope being the speedy checking of the erysipelas, which was accomplished in about fifty-six hours. Free incisions were required to allow of the exit of the discharges that burrowed under the integument, which was freely detached from the muscles. After the tissues had been restored, and all evidence of the secretion of pus had ceased, grafting was begun. On April 7th fifty grafts were planted, the planting continuing, as grafts could be procured, up to April 13th, by which date three hundred grafts had been made, with a very insignificant loss.

On April 17th the erysipelas, which had been controlled with so much difficulty, again set in, but fortunately the destruction of the grafts was averted. On May 4th erysipelas for the third time attacked the arm, when it was concluded that the sanitary conditions surrounding the patient were unfavorable for the successful result of the operation—the residence of the patient being but a few feet removed from his barn, containing about forty horses, with constant communication between the two points. It was therefore deemed advisable to remove my patient to a lower altitude and purer air. The rapid improvement following his removal justified the insistance on the change, the erysipelas being checked, nor did it again complicate the case during the continuance of the treatment. The grafts used were about one-sixteenth of an inch in diameter, and were applied to the granulating surface immediately after being removed, gently pressed into position so that their cut surfaces would come in contact with the granulations in their entirety. The grafts gave evidence of having identified themselves with the granulations about the third day from the date of planting. The preparatory treatment of the part of the person from which the grafts were taken was by washing with white Castile soap and warm water, after which Listerine, containing a grain of bichloride of mercury to the ounce, was applied. The granulating surface was also brushed with the same lotion, the superabundant moisture being absorbed with bichloride gauze. After the planting of the grafts they were covered with tissue, which had been previously immersed in the Listerine lotion, then bichloride cotton, and tissue over the cotton, held in place by a roller-bandage. The grafts were taken from the arms of ten different persons, none of whom suffered the slightest inconvenience from their loss, their arms being protected by antiseptic dressing.

I am fully impressed with the fact that the success of the operation was entirely due to the opportune moment selected for the transferrence of the grafts, the planting being delayed until the muscular tissue was fully restored, and all pus had ceased to be secreted.

The photographs accompanying this report were taken, one during the progress of the growth of the grafts and the other six months after the integrity of the skin had been restored.

The New York Academy of Medicine has passed what may be called a "Statute of Limitations" as regards the length of papers read at its meetings, which is said to work well. Ten minutes is the time allotted for an ordinary paper. This is less than the Duke of Wellington allowed for sermons. It will be remembered that when asked by a clergyman what he should preach about, the Duke replied "About a quarter of an hour."—*British Medical Journal.*

Progress of Medical Science.

Syphilis and Athletics.—The army and navy doctors who took part in a recent discussion on athletics, at the London Medical Society, took a very desponding view of the effects of syphilis in promoting physical breakdown under a strain. One gentleman laid it down as an axiom that men who had suffered from syphilis should at once and forever abjure athletic pursuits. Another speaker considered that secondary syphilis was a *primâ facie* reason for invaliding soldiers home (*The Hospital Gazette*). Fortunately, Mr. Jonathan Hutchinson does not take so gloomy a view, and as he speaks with a possibly unrivalled experience of the disease, his dictum is reassuring to the unfortunate victims. It cannot be denied that the course of the disease is sometimes associated with a very marked depreciation of muscular energy, but this may be due in part to the moral effect, and Mr. Hutchinson asserts that in many instances the condition is directly due to the depressing influence of the prolonged ingestion of iodide of potassium. With regard to the influence of physical exertion in causing structural and functional heart trouble, the speakers were agreed that it is the repetition of the strain that is so injurious, especially when it takes the form of racing against time. Of sports, rowing would appear to be the least dangerous, while running and cycling are fertile sources of cardiac hypertrophy and tachycardia.

Pasteur's Hydrophobia Cure a Failure.—Pasteur's inoculation cure for hydrophobia seems to be in a bad way, if, indeed, it does not prove shortly to be as inefficacious, not to say as injurious, as Koch's cure for phthisis. The conclusive statistics which were to convince the unbelieving public have not been forthcoming, but one was prepared to wait awhile, hoping against hope, when, however, at a *fête* organized for the express purpose of honoring the illustrious *savant*, one of the principal orators, Sir Joseph Lister to wit, feels constrained to apologize for its failure, one feels instinctively that the vaunted cure may be dismissed as null and void. If, said Sir Joseph, M. Pasteur had been prematurely credited with having found a definite cure for hydrophobia the fault lay with his eager admirers and not with himself. Only one construction can be placed on this utterance, though no one would underrate the importance of the researches, in spite of their not having been crowned by therapeutical success. We can, at any rate, confer immunity against the bite of mad dogs by previous inoculation, and patients must take the consequence of getting bitten before being vaccinated.—*Medical Times.*

A Gas-forming Bacillus in the Urine in Cystitis.—Dr. Schow reports the result of a bacteriological examination of the urine of a patient suffering from compression myelitis with incontinence of urine and cystitis (*The Lancet*). The urine had a sulphur-like odor. It contained an organism which Schow classes as a cocco bacillus, from the fact that some specimens had the form of cocci while others were short rods. The organism stained with the ordinary aniline dyes, including Gram's stain, and grew upon the usual media, in some with production of gas. It also grew rapidly upon sterilized urine, producing cloudiness, slight alkalinity, gas-bubbles, and a somewhat aromatic odor, differing, however, from that noticed in the patient's urine. As modifications of this odor had been noticed in the other culture media, Schow concludes that it was produced by the microbe in question and that the modifications mentioned were dependent on the different constitution of the media employed. The gas proved to be carbonic acid. A broth culture of the organism was injected into the bladder of a dog and the urethra subsequently ligatured; the period of retention was six hours. The urine examined next day was found to be cloudy and alkaline, and to contain besides triple phosphates and oxalate of lime the microbes above described, in small quantity. Schow proposes for this organism the name of "cocco bacillus aërogenes vesicæ."

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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ON MEDICAL LITERARY STYLE.

WHILE he does not expect to compare a medical article with an essay of Addison's or a page of Irving's, the intelligent reader (all readers are "intelligent") must be frequently impressed with the fact that the fingers which possess the most delicate *tactus eruditus*, or handle the scalpel with unerring skill, do not always guide the pen in the way that it should go.

Some of the most eminent members of the profession are in the noblest sense self-made men, who have never enjoyed the advantages of a liberal education. Yet these are by no means the writers whose style is lacking in purity or clearness. Their terse, clean-cut sentences often attract where the elaborate periods of more polished authors only weary. These seem out of place in a scientific paper, in which the reader looks for facts rather than for fancies. If such facts can be clearly and forcibly stated in elegant language, so much the better; but clearness and conciseness should be aimed at first, beauty afterward.

An author's style is a pretty good index of his character, and usually, though not always, agrees with his manner of expressing himself in Society discussions. A few men seem to have their ideas arranged in an orderly way, so that they can be presented in a few well-chosen words. They follow the rule of saying what they have to say and then sitting down. The majority, however, apparently have no clear notion of what they are driving at, and after floundering about for twenty minutes finally conclude, leaving the impression that they have simply been "talking against time." This same pernicious habit is apparent in their writings—an attempt to spread a few facts over a large area. Strange as it may appear, the average physician, whose knowledge is supposed to be clear and definite, is not able to express himself tersely and accurately either in spoken or written language. This is a defect which could be easily remedied by requiring every advanced medical student and hospital interne to cultivate the habit of recording the histories of cases and his own deductions from the data collected by him and submitting his articles for literary criticism precisely in the same manner as college compositions. It is conceded that a physician should be a gentleman. Why not at the same time a master of English?

We cannot all express our thoughts with equal facility but we can certainly acquire the art of speaking and writing clearly and logically, if we have the brains to study medicine. A surgeon who cannot control his pen would be wiser never to trifle with that dangerous little tool, but to stick to the sword.

THE INDICATION OF THE BOTTLE.

"TILL taught by pain men know not what good water's worth." So wrote Lord Byron. He probably did not have in mind exactly the same fluid as that to which we refer, but his sentiment is just as true a one. When a man is sick he is quite sure to contemplate the urinal with more than ordinary scrutiny. And if he goes to a physician there is sooner or later a bottle with a specimen in his pocket.

It has often appeared to us that much can be learned of the character of the individual, and even of his disease, by a thoughtful study of this propitiatory offering on the shrine of Diagnosis. All careful observers will have noted a general fact, that women bring smaller bottles than men. The sex stands out strongly here. The element of modesty enters, we have no doubt, in the production of this phenomenon.

A half-ounce vial, partly filled, rather badly wrapped up, with a white cotton thread round the neck indicates a woman of a sensitive temperament, and not very much used to personal medication. Sometimes the specimen is two or three days old, which means that it was procured directly after the last consultation, so that it should not be forgotten. Hysterical women are much more apt to have liberal ideas as to quantity, probably on account of a polyuria, which furnishes a rich supply. The mother always sends a small sample of the baby's renal work. Here one can easily see the working of a logical mind, which some ignorantly deny to woman. The baby being small naturally not so much of a specimen is needed. Men unquestionably take a larger and more generous view of what the doctor needs. A half-pint to a pint of morning urine seems to be considered the correct thing. Occasionally two bottles, neatly done up and carefully labelled "Morning" and "Night," are furnished as a basis for a scientific study. When a patient on calling takes from his pocket two bottles thus marked, which he has voluntarily prepared, a diagnosis of morbid introspection and chronic invalidism can at once be made.

Some have suggested that the kind of bottle and the character of the wrapper furnish helpful indications of sex, condition, social position, and personal habits. There is, we are sure, a rich field for investigation here. Our art, in fact, brings out ever-fresh pages in the entrancing book of human nature.

THE TRICOPHYTONS OF MAN.

DR. SABOURAUD has within a short time presented the results of a series of microscopical and bacteriological investigations before the Paris Dermatological Society, which are of great importance in the elucidation of some features of tricophytosis which have hitherto been dark. It has for some time been considered that favus, which bears a close relationship to ringworm, occurs in several clinical varieties, and Quincke has described three varieties of fungus which he has found, but until now no one has shown that the latter disease as well has its several clinical forms, accounted for by differences in the micro-

organism on which they depend. The investigator has demonstrated that the parasites which produce on the human skin what is generally known as tricophytosis, belong to the genus Botrytes of the Mucorini, and form a group which in botany would be known as Botrytis tricophyton. Human ringworm diseases are caused by two species of this group. The first species has a spore three micromillimetres in diameter, but the mycelium is not visible. Regions devoid of having growth are probably never invaded by this particular tricophyton, which is termed microsporon, and, the investigator thinks, is in all probability the one which causes the severe and obstinate tricophytosis of infancy.

The second variety has large spores over twice the size of the first, and mycelium uniting them, which can be plainly seen. This is termed macrosporon, and while it may occasion ringworm in infancy, it is the cause of at least a third of all cases, and is especially active in bringing about those tineas of the bearded regions which often prove so difficult to cure. In general terms this second species is the universal cause of tinea circinata.

Besides these two the observer has isolated and cultivated the spores of two other varieties of tricophyton affecting man, one having large spores and found up to the present time only in circinate ringworm. Here the spores are of rapid growth, and decidedly more vigorous than those of ordinary tricophytosis. The other also with large spores, but without visible mycelium, and found till now only in infancy. Pursuing his investigations, a tricophyton producing a black culture, supposed to belong to some animal tinea, was isolated from a case of ringworm of the skin, where it was supposed to have been accidentally cultivated. A second variety showing a rosy culture was derived from a tricophytosis barbæ.

It is needless to dilate upon the importance to dermatology which these observations will possess, provided they are substantiated by subsequent investigation. They explain the peculiar depravity of some cases which "will not down," and the marked and prompt effect which very simple measures exert in others. It will be at least some satisfaction, after treating an epidemic of ringworm of the scalp in a school or asylum for months together with all the latest scientific microbicides, to know that the disease is here due to a more vigorous organism than the one producing our neighbor's case, which he cures in three days with an old copper penny dipped in vinegar.

CHICAGO AS A PLACE FOR SCIENTIFIC GATHERINGS.

At a meeting of the American Neurological Association, in June of last year, it was voted to recommend to the Council that the meeting of this year be held in Chicago or some neighboring city. The Council, however, have just issued a circular in which they state the belief that "in Chicago the World's Fair will seriously affect the attendance at the meetings, and thereby detract from the scientific value of the discussion." The next meeting will therefore be held at Saratoga on July 25th, 26th, and 27th.

This decision of the American Neurological Association is undoubtedly a wise one, and one which may well be imitated by others of our national associations. The notion of meeting in Chicago, where everyone more or less vaguely intends to go, is at first thought an attractive one. But the atmosphere will not be conducive to scientific calm, nor will visitors feel much like shutting themselves up to discuss abstract themes when there is so much of objective interest about them.

SURGEON-GENERAL GEORGE M. STERNBERG, U. S. A.

It is with the feeling of greatest satisfaction that we announce the appointment of Dr. Sternberg as Surgeon-General of the Army. The medical profession, in which he is an earnest and original worker, will be especially pleased to see such a representative man in such a responsible position. Aside from this, having had extensive experience in every branch of the medical service in hospital and field, and having made for himself besides a high reputation as a bacteriologist, he will be enabled to grasp the practical as well as scientific requirements of his office, thus giving to its functions an impetus which it has not had for a long period. We offer Dr. Sternberg our congratulations and extend him heart and hand.

THE CODE QUESTION AND THE AMERICAN MEDICAL ASSOCIATION.

It is to be hoped that the discussion of the Code question which threatens at the Chicago meeting will be sufficiently deliberate and becomingly harmonious. We are, however, at a loss to see why the question should come up at all just at this time. It is difficult to understand how it is possible to reconcile the differences of opinion existing between the Association and the Medical Society of the State of New York, which is really the point at issue. The Medical Society of New York cannot possibly retract anything. Its members have been denied representation for years because of belief in a more liberal interpretation of professional etiquette, and the Society cannot afford at this juncture to modify its views. The State Society would be happy to affiliate if invited to do so by the removal of all restrictions against it. It dignifiedly and calmly awaits the answer.

Cancer not Increasing.—At a recent meeting of the Royal Society, Mr. George King, F.I.A., and Dr. Arthur Newsholme, read a paper on "The Alleged Increase of Cancer," in which they supported the old opinion that the supposed increase in cancer is only apparent, and is due to improvement in diagnosis and more careful certification of the causes of death. Their arguments are founded on a comparison of the official cancer death-rates for England and Wales, Scotland, and Ireland, with other data obtained from the experience of the Scottish Widows' Fund and the official cancer returns of Frankfort-on-the-Main.

Dr. Alessandri, an eminent authority on criminal anthropology, was killed recently by a prisoner in the penitentiary at Civita Vecchia. The prisoner had been shamming illness and was examined by Dr. Alessandri, who pronounced him a malingerer, and ordered him back to his cell. The man became enraged and stabbed the doctor in the breast with a sharp piece of iron which he had concealed in his coat.

News of the Week.

A Full Morgue.—Very pathetic, and quite unaccountable, too, are the accounts which reach us of the overflowing fulness of the Morgue, at Paris. Spring is not a season suggestive of despair or hopelessness, but for some unexplainable reason it seems to have inspired with such feelings many miserable inhabitants of the French capital. The first week in April (says a special correspondent) saw no less than fifty-seven corpses brought to this said House of Identification, on the banks of the Seine. Indeed, the resources of the officials attached to the Morgue are still taxed to their uttermost to meet the demands thus laid upon them, for the place is full to overflowing.

Medical Opinions on the Afternoon Nap.—It is a solemn subject, this of the afternoon nap. *Wit and Wisdom* has collected twenty-four "eminent" opinions upon it. Probably not one person in a hundred who reads the opinions will be enabled thereby to decide whether he ought to take an afternoon nap or not, but he will discover that brain-workers as a class have a great faculty for pleasing themselves in this matter, and find their account in so doing. Life, after all, is not made for physiology, but physiology for life. In other words, Nature, apparently, never intended the doctor to be the chief hierarch of well humanity, but only a helper and a nurse of humanity when it is sick. Since it is now our *métier* to improve upon Nature, the doctor is beginning to assert himself in a new capacity. He claims to be something more than a helper and a nurse in sickness. He professes to be a teacher and a scientific prophet for the well. In this latter capacity he has very decided opinions about the afternoon nap. For the healthy the nap in the afternoon is not necessary, and the brain will not demand it. If a man finds himself napping at that time, either he has eaten too much at his midday meal, or his cerebral circulation is feeble. It is the universal habit of the pig that is being fattened to sleep in his sty after his midday meal. The working horse, on the other hand, which gets nothing at midday but a feed of corn—a small but highly nutritious meal—does not sleep at all after it, but is fresh and ready for work in half an hour.—*The Hospital.*

Too Many Doctors.—The *Riforma Medica* complains that the number of doctors in Italy is already in excess of the number required, and is continually increasing. Among other large towns, Naples counts a doctor for every 513 inhabitants. The natural result is that the amount of fees which falls to the lot of these practitioners is very inconsiderable. Compared with all the other liberal professions, it would seem that medicine is, from a pecuniary point of view, the least productive in Italy.

The College of Physicians and Surgeons, Chicago.—In order to encourage graduates of literary and scientific schools to undertake the study of medicine, the College of Physicians and Surgeons offers ten scholarships, each of which is valued at $100 a year for three years, to such applicants as present evidence of the best qualifications for medical study.

Butter and Milk for the Poor.—On June 1st the Tenth Ward Social Reform Club opened a store at 71 Rivington Street where pure milk, fresh butter, eggs, etc., will be for sale at cost price. The store is to be run upon a co-operative plan by a number of gentlemen who have interested themselves in alleviating the condition of the poor children on the East Side.

First Symphyseotomy.—Dr. Garrigues writes: "On page 611 the first symphyseotomy in this country was erroneously attributed to Dr. Hirst. His operation was done October 3d and Dr. Jewett's on September 30th."

The Indiana State Medical Society met in its forty-fourth annual session at Indianapolis, May 11, 1893. The President, Dr. George F. Beasly, of La Fayette, was in the chair and opened the meeting with a few remarks. Two hundred members were present at the opening meeting. The Secretary, Dr. E. S. Elder, reported a prosperous condition of the society during the past year. Reports came from seventy-two auxiliary societies with a total paying membership of 1,227. The report on necrology was made by Dr. James F. Hibberd, of Richmond. Twelve have died during the year past. Among them Drs. Wiles, De Bruler, Severance, Porter, Yohn, Spaulding, Wright, Shrively, and Lomax. A discussion was had as to the advisability of dividing the society into two sessions, one general medicine, one general surgery, but it failed to pass, as did also the suggestion that certain gentlemen be appointed to read papers on certain subjects and others to discuss these subjects. It seems that there are too many papers presented and some of them not of sufficient merit to warrant taking the time of the Society. A member suggested that there was not sufficient nerve displayed in refusing papers lacking in merit. The President in his address said, after discussing the Code, that it would be difficult to change it for the better. He complained that that part of the Code which forbids the use of secular papers to report cases was a dead letter. No class gets more free advertising than do the doctors. They do not pay for it, they give it in as news, but it is advertising. The doctor then turned his attention to higher medical education and the multiplication of doctors and colleges. The election of officers resulted as follows: *President*, Dr. C. A. Daugherty, South Bend; *Vice-President*, Dr. T. F. Leech, Crawfordsville; *Secretary*, Dr. E. S. Elder, Indianapolis; *Assistant Secretary*, Dr. A. A. Shipman, Seymour; *Tresurer*, Dr. J. O. Stillson, Indianapolis. The meeting adjourned to meet the first Thursday in May, 1894, at Indianapolis. Three hundred members registered and the meeting was considered one of the best in the history of the society.

Association of Acting Assistant Surgeons United States Army.—A meeting of the Association of Acting Assistant Surgeons United States Army was held in Boston, May 25th. The following officers were elected: *President*, Dr. D. S. Lambs, of Washington, D. C.; *Vice-Presidents*, Dr. Ord, of California; Dr. Comfort, of Wisconsin; Dr. Pratt, Chelsea, Mass; *Recorder*, Dr. W. Thornton Parker, Groveland, Mass.; *Registrar*, Dr. McLain, Washington, D. C.; *Council*, Drs. Deeble, Porter, Hoffman, Gumbes, Gillicuddy, Benedict, Dixon, and Pattee. A committee was appointed to prepare suitable resolutions on the death of the late president of the Association, Dr. Reeves Jackson, of Chicago; also of Drs. Huse, of Massachusetts, and Sargent, of Pennsylvania, deceased members. It was voted to admit as asso-

ciate members, former Acting Assistant Surgeons of the United States Navy and of the Marine Hospital Service, and Surgeons of the United States Indian Service, Medical Officers of the United States Army and of the Militia, and physicians in the employ of the United States Government. The office of treasurer was merged with that of recorder. A suitable constitution has been accepted and provision made for the organization of local societies. The outlook for the future success of the society was never better. The past and present Acting Assistant Surgeons, before, during, or since the war, are cordially invited to become members.

The Faculty of Rush Medical College gives a course on Medical Ethics, which we are told is much appreciated. Such courses might fill a want in graduate institutions.

The Number of Morphinomaniacs in Paris is estimated by M. Dubut de Laforet to be one hundred thousand. According to this extraordinary statement every tenth adult is a victim of the morphine habit.

Belgium has one saloon to every thirty-nine inhabitants, and consumes $100,000,000 of liquors every year.

The Number of Criminal Abortions in this city was very great during January and February. The opinion has been expressed that only one in every thousand cases are detected. At this rate the number in New York would be about eighty thousand a year. Some astute gentleman has emitted the theory that there has been an increase in criminal abortion because the police have been compelled by force of public opinion to look a little more sharply into the number and character of the city's brothels! By what process of Tammanyized ratiocination such a conclusion has been reached we cannot conceive. It would seem much simpler to suppose it due to the sudden increase of semi obscene shows and so-called "intense" literature which has taken place. In this connection we append an interesting paragraph from an article by Dr. Parrish on criminal abortion. He says: "The practice of destroying the fœtus *in utero* is not of modern introduction, but is recorded in history from the earlier nations, with the sole exception of the Jews. Aristotle and Plato defend it ('Travels of Anacharsis,' vol. iv., p. 342; vol. v., p. 270). It is mentioned by Juvenal, Ovid, Seneca, and Cicero, and denounced by the earlier Christians. It was common in Europe through the Middle Ages and still prevails among the Mohammedans, Chinese, Japanese, Hindoos, and it has been so extensively resorted to in most of the nations of Africa and Polynesia that it is doubtful if more have died in these countries by plague, famine, and the sword.

Professor Arnoldo Cantani, one of the most brilliant and distinguished of Italian physicians, died on May 1st, aged fifty-seven. His death was caused by Bright's disease, a malady concerning which he had written much. He was at the time of his death Professor of Clinical Medicine in the University of Naples. While at Naples he wrote monographs upon the "Diseases of Metabolism," "Progressive Atrophy of the Skin," "Lathyrismus," "Enteroklysma," "Different Morbid Aspects of Individual Infective Disease," to say nothing of a vast number of occasional monographs and notes on his favorite themes of fever, inflammation, and infection.

"The predominant note in Cantani's character," writes a Neapolitan correspondent of *The Lancet*, "was serenity. No one possessed a calmer, more perfectly balanced judgment; no one was further removed from all that savors of flattery or assentation. He had in a rare degree what professional men call the 'clinical eye'—a possession all the more remarkable in that he did not lay himself out so much for consultant practice as for investigation in the pathological laboratory. The honors, of which he had more than his share, came to him unsought, and he never was heard or seen to set store by them. Called in 1889 to the Senate of the kingdom, his health, never robust, kept him from taking part in its deliberations, except in rare crises in the State. Outside his professional sphere, and that was an extensive one, he had but one predilection—he was passionately fond of music."

Dr. A. H. Ohmann Dumesnil retires from the editorship of the *Medical Review*, and is succeeded by Dr. L. T. Riesmeyer. Dr. Dumesnil has made the *Review* an interesting journal.

The State and Habitual Drunkards.—A committee appointed by the Home Secretary has made a report to Parliament concerning the question of drunkards and inebriates. With regard to the last class of persons it recommends that reformatory institutions should be provided, aided by contributions from Imperial and local funds, for the reception and detention of criminal habitual drunkards, who might be subjected to less rigorous discipline than in existing prisons and to the performance of such labor as might be prescribed; and they further recommend that magistrates should have power to commit to such reformatory institutions for lengthened periods, with or without previous punishment of imprisonment, habitual drunkards (*a*) who come within the action of the criminal law, (*b*) who fail to find sureties and recognizances, (*c*) who have been brought up for breach of such recognizances, (*d*) who are proved guilty of ill treatment or neglect of their wives and families, or (*e*) who have been convicted of drunkenness three or more times within the previous twelve months. The London correspondent of a New York daily makes a curious comment upon these recommendations. They are, he says, such as "no self-respecting inebriate" would tolerate. The conjunction of a delicate and sensitive self-respect with the habit of perpetual inebriety is very amusing.

Receptions by Drs. Knapp and Gill Wylie.—On Monday evening Dr. Herman Knapp gave a reception at his residence in West 40th Street in honor of Professor Zehender, of Munich, and Dr. W. Gill Wylie, his neighbor, tendered a similar courtesy to Professor T. Gaillard Thomas, of this city. Fully four hundred representative medical men from this city and vicinity responded to the invitations and passed from one house to the other between the hours of nine and eleven. The occasion partook somewhat of the nature of a medical housewarming, as both Drs. Knapp and Wylie have only recently moved into their new, spacious, and elegantly constructed mansions.

St. Luke's Hospital, New York, has been sold to a syndicate for two million five hundred thousand dollars.

Manotrichloracetyledimethylphenylpyrazalon is the chemical name for hypnol. Prescribers who object to trade names for drugs can use the chemical one.

Reviews and Notices of Books.

Varicocele and Its Treatment. By G. Frank Lydston, M.D., Professor of Surgical Diseases of the Genito-Urinary Organs and Venereal Diseases in the Chicago College of Physicians and Surgeons, etc. With Illustrations. 8vo., pp. 126. Chicago: W. T. Keener. 1892.

In this monograph the author goes over the field of operative suggestion, after discussing frequency, cause, and such interesting questions as that of atrophy of the testicle from the disease itself or following operation, etc. Curling's view that atrophy results from varicocele is substantiated by many observers with whom the author is inclined to agree, believing that the shrinkage is a true atrophy as "shown by the extraordinary development of the shrunken testes after operation," with return of fulness and sensibility. Phlebitis appears to be the chief danger of operation. The accuracy of the reported spontaneous cures is doubted by the author. Electricity is considered worthless and electrolysis is regarded with doubt both as to its utility and safety. Keyes's method is looked upon as the best of the subcutaneous operations, and one of the most systematic clamp operations is that advanced by Wickham with a Horteloup clamp. The Henry clamp and operation are well spoken of. The wood-cut illustrations are not praiseworthy. Elegance of style leaves here and there something to be desired, as for example on page 63 there is a lightness about the paragraph, "Even poor old alcohol has been appealed to for a cure, a Russian with the euphonious cognomen of Duhonovsky being the guilty party," which would appear less out of place in a journal article than in a serious work. A bibliography adds to the value of this review of the subject of varicocele and the best ways to treat it.

Studies from the Pathological Laboratory of the College of Physicians and Surgeons, Columbia College, N. Y. Vol. II.

This is a collection of reprints of the more important studies published by different authors working at this well-known laboratory under the supervision of Dr. Prudden. The scientific value of much of the work done at that institution is amply attested by this little volume, which makes reference to these subjects convenient.

Festschrift zur Feier seines 70-jährigen Geburtstages am 9 Januar 1893. Friedrich von Esmarch. Ueberschrift von Schülern, Freunden, und Verehrern. Kiel und Leipzig: Lipsius & Tischer. 1893.

This is the volume gotten up by the admirers and former pupils of Professor von Esmarch in honor of his seventieth birthday. It consists of a series of nineteen monographs on surgical subjects, many of them of very superior merit, and forms a volume of nearly five hundred pages, which is certainly a valuable addition to chirurgical literature. The frontispiece is an excellent portrait of Esmarch, as he looks now, and it presents no indications of the weakness and decrepitude which the Psalmist wrongly proclaims to be the portion of him whose age surpasses the limit of three score years and ten. The authors of the several monographs of which the work is made up are Petersen, Bier, and Dittrich, of Kiel; Nonne, Lauenstein, Waitz, Schede, and Kümmell, of Hamburg; Krause and Capersohn, of Altona; Landerer and Tillmanns, of Leipsic; Schüssler, of Bremen; Hoffa, of Wurtzburg; Schmid, of Stettin; Schlange and Sonnenburg, of Berlin; Lange, of New York; and T. Pridgin Teale, of Leeds. Many of these monographs are well illustrated, nearly all are well written, and several are instructive. The book is handsomely printed, and is a fitting testimonial to an honored surgeon and a noble man.

Handbuch der Kriegschirurgischen Technik. Von Dr. Friedrich von Esmarch, Professor der Chirurgie in Kiel. Vierte Auflage, durchgehends neubearbeitet, vermehrt und verbessert, von Dr. Fr. von Esmarch und Dr. E. Kowalzig. Erster Band-Verbandlehre. Kiel und Leipzig: Lipsius & Tischer. 1893.

This is the first volume of a fourth edition of Esmarch's classical work on Military Surgery. It treats almost entirely of the forms and application of bandages, splints, and orthopedic appliances. The opening chapters deal with asepsis, antisepsis, drainage of wounds, and the application of dressings after operation. Then follows the part devoted especially to bandaging and mechanical surgery, and finally the volume closes with a short chapter on antisepsis on the battle-field and in war. A new edition of Professor von Esmarch's work needs no commendation, for its reputation is too widespread, but we can say that this has been carefully edited and brought down to the latest advances in surgical art, the illustrations are numerous and well-executed, and the printers have done their part in making the setting of the book worthy of its contents.

A Pocket Medical Dictionary; Giving the Pronunciation and Definition of about Twelve Thousand of the Principal Words used in Medicine and the Collateral Sciences. By George M. Gould, A.M., M.D., author of "A New Medical Dictionary;" Ophthalmic Surgeon to the Philadelphia Hospital. Philadelphia: P. Blakiston, Son & Co.

This is a handy little volume of medical terms, convenient in shape and size and printed in clear type, which will doubtless be found extremely useful by students for class-room reference. A commendable feature is the insertion of tables of the arteries, muscles, nerves, and micro-organisms, a comparison of the Centigrade, Réaumur, and Fahrenheit thermometric scales, and a list of drugs with their doses according to both the English and metric systems. There are, however, some serious errors in the book, not always due to carelessness in proofreading. There is an occasional slip in orthography, and the figured pronunciation of the words is often misleading, at times even absurd. But as a rule the definitions are clear and concise, and the faults of the work are not sufficiently numerous to detract materially from its usefulness as a students' guide, though they would effectually dispose of any claim to authoritativeness which might be hazarded.

Characteristics. By S. Weir Mitchell, M.D. (Harvard). New York: The Century Co. 1892.

This is a light novelette, seasoned by epigrammatic wit and some good stories, written by a man of poetic temperament in hours of relaxation. The characters pose a little; so does the wit, when imprisoned in a book, and so does everything, slightly. The epigrams and bits of philosophy arranged on a calendar would make spicy reading for every day in the year. Its happy owner would go forth with a laugh each morning, and a general feeling of jollity and cheer that might change the surface of a whole day. At least, he would be sure of one good thought in twenty-four hours. Here are some of the epigrams, the "characteristics" of a writer well-known to medicine and to literature.

"At a certain age the poets should be retired on prose pensions."

"There are three marriages. One is a monarchy; a king or queen presides over life. One is a true federative republic; there is equality under large sense of law and of mutual rights. The third is anarchy."

"When you come at last to pay the debts contracted by that idiot Pity, the little god is apt to put up the shutters and declare that he is not at home for business."

"Every man has need at times of a monastic life. If he cannot make one for himself, he must be a poor

creature. If I were married, I would desire divorce for six months in each year."

"Quick-witted folks are apt to be impatient. It needs the finest manners to keep them free from the appearance of showing that they have anticipated your explanations. They are very likely to be a trifle annoyed at overfulness of statement, just as a slightly deaf man is at your speaking too loud."

"Men differ, but all husbands are alike. . . . The husband is generically alike, but specifically various."

"Some idiots have been saying of late that Bacon wrote Shakespeare's plays. One point settled it for me. Humor is a light no man can hide. Bacon has none of it, and it is everywhere in Shakespeare."

"For good talk, you must have people used to talk and to listen. They want to amuse and be amused. You can't have good talk without good manners."

"It takes two to make a joke as well as a quarrel."

"Work has its influence on character, and on what makes for or against social charm. . . . It is the business of every man to see that his work in life does not put into his character anything which lessens his powers to please and be pleased in right ways."

"Once, after I put her on bread and water for a day, she told me that the Bible said that 'man shall not live by bread alone.' So I told her she had water too. When I came to let her out that evening, she said, 'I'm so sorry, mamma, I did not think about the water, and I forgot I was a girl; the Bible says a man.'"

"The greatest poets are always the greatest masters of verse; the lesser ones may be melodious, but are never capable of the higher music of verse. The architects of thought are the master builders. Then, too, it is a curiously denominative temperament. I never shall believe there was ever a 'mute Milton.'"

"Have you not observed that clever women are apt to have more than one serious love affair? . . . I will make it plain to you. The answer to any one such drama is in the next."

"Once, by a death-bed in a hospital, I heard a surgeon say, as a man ceased to breathe, 'It has stopped; the engine has ceased to go.' His senior, an old man, replied, 'No; the engineer has left it.' At every dead man's side I feel more and more that something immaterial as the Being who willed the thing to live has escaped me and my analysis. Life seems to me a thing as real, as positive as death. As we live on and on, we get to have more and more trust in recognitions of truth indefensible by mere logic."

Handbook of Massage. By Emil Kleen, M.D., Ph. D., Carlsbad. Authorized translation from the Swedish. By Edward Mussey Hartwell, M.D., Ph.D., Director of Physical Training in the Public Schools of Boston, etc. Philadelphia: P. Blakiston, Son & Co. 1892.

It is undoubtedly true that the value of massage as an adjuvant to other therapeutical measures has not yet received the full appreciation from physicians which it should have. Even many who believe fully in its merits for suitable cases do not give themselves the trouble to master the theories which should govern it, much less its practice. This handbook has been written by a physician who practises massage, and was originally intended more especially for the use of students of medicine. With this end in view it will be found that the author lays particular stress upon the indications and contra-indications for the application of massage as a remedial agent to be employed in connection with other lines of treatment, rather than as an exclusive method of treatment. This book has already been translated into German by Schütz, and its freedom from specialistic narrowness and lack of exaggerated claims, together with other praiseworthy features, have commended it to the practising physician. The translator, appreciating the need of "therapeutic aid from a higher point of view than that of the mere masseur," as Dr. Weir Mitchell puts it in the introduction which he has written to the American edition, has placed this work before English readers. The clearness and simplicity of style; the common-sense way of looking at the various problems; and the scientific basis from which they are discussed, make the work a valuable one for student, practitioner, and practical masseur.

Diseases of the Eye, Ear, Throat, and Nose. A Manual for Students and Practitioners. By Frank E. Miller, M.D., James P. McEvoy, M.D., and John E. Weeks, M.D. Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy, College of Physicians and Surgeons, New York, etc. Philadelphia: Lea Brothers & Co.

This is one of the little volumes of the Student's Quiz Series, which enables a man in practice to give himself an occasional quiz and see how much he has forgotten. It is intended, however, more particularly for the use of the student, not only to show him how much he has yet to learn, but to make its accomplishment easier: to enable him to give his whole attention to lectures on these subjects without note-taking, and to go over in a condensed form, before an examination or quiz, the essential facts pertaining to the special branch.

The work is well illustrated and makes, indeed, quite an attractive companion to the larger handbooks on these subjects.

A Clinical Study of Diseases of the Kidneys, including Systematic Chemical Examination of Urine for Clinical Purposes, Systematic Microscopical Examination of Urinary Sediments, Systematic Application of Urinary Analysis to Diagnosis and Prognosis, Treatment. By Clifford Mitchell, A.M., M.D. Second Edition. Chicago: W. T. Keener. 1891.

Though nothing in the title, professional appointments held by the author, or prefaces indicates that such is the case, one has not to read many pages of the chapter on therapeutics before becoming aware that the work is written from the standpoint of a homœopathic practitioner. In the first chapter the physical characteristics of normal urine first receive attention, then the manipulations and tests necessary for the detection of various pathological conditions are taken up, together with microscopic analysis. These tests and their application to diagnosis take up one-quarter of the volume. The remaining three hundred pages are devoted to the therapeutics of renal diseases. While frequent reference is made to the treatment laid down by well-recognized authorities, the greater portion of the text treats of the various homœopathic remedies and the indications for their use. Diet, climate, exercise, air, and hygiene generally receive the recognition which their importance calls for in Bright's, and other kidney diseases, and this part of the work has been written with especial reference to the needs of American patients. The organs of urination, from the kidney down to the meatus urinarius, have received considerable attention. The number of subjects touched upon is shown in the fourteen closely printed pages of index, besides a supplementary page to the second edition. The work will of course be of most value to a follower of the author's school, while almost all that does not pertain to homœopathy can be found elsewhere.

Dictionary of Psychological Medicine, giving the Definition, Etymology, and Synonyms of the Terms used in Medical Psychology, with the Symptoms, Treatment, and Pathology of Insanity, and the Law of Lunacy in Great Britain and Ireland. Edited by D. Hack Tuke, M.D., LL.D. 2 vols. Philadelphia: P. Blakiston & Co. 1892.

Dr. Tuke's Dictionary is in two volumes, with a total of 1,477 pages. The list of contributors includes about one hundred names; most of these are English, but we notice several Americans, a good many French, and a few Germans. Among the foreign names are those of Charcot,

Schüle, Benedict, Mierzejewski, and Ball; also J. B. Chapin and Edward Cowles, of this country. We find, on examination, that most of these eminent contributors send short or collaborated articles, however, and that the bulk of the work is done at home, that is to say, in England. The work is not strictly an international one.

Its special value will be found to lie in its containing many good, though short, monographs on subjects embraced under the broad head of psychological medicine. Such articles, for example, as those on Hypnotism, Psychology, Physiological Psychology, Criminal Anthropology, and Psycho-physical Methods are very useful and not easily accessible elsewhere. The Dictionary is particularly rich in its definitions and descriptions of all possible medico-psychological terms.

M. Toureth has condensed his book on hysteria into an article for Dr. Tuke, to which article Charcot appends his name also. M. Legrain has written most ably upon dipsomania; we trust that the numerous American cranks who, in past years have been benumbing science with their tiresome iterations concerning inebriety as a disease will read this and learn something. There are many good articles on special forms of insanity, though here there is much unevenness in treatment. The work is most deficient in its ignoring modern tendencies of classification and clinical analysis as developed by German, Italian, and American alienists. In this respect the book is a generation behind the times. A student could never learn from its pages of the masterly works of Krafft-Ebing, Schüle, Levisteni-Schlegel, Kichhoff, and others. The descriptions of the anatomy of the nervous system are not very complete or satisfactory, and the morbid anatomy is only a rehash from Bevan Lewis. English alienists do not seem to think that post-mortems are ever made outside of their island.

The book is fairly printed and has some not very good illustrations.

Psychopathia Sexualis, with Especial Reference to Contrary Sexual Instinct. A Medico-legal Study. By Dr. R. von Krafft-Ebing, Professor of Psychiatry and Neurology, University of Vienna. Authorized translation of seventh German edition by Charles Gilbert Chaddock, M.D., Professor of Nervous and Mental Diseases, Marion-Sims College of Medicine, St. Louis. 8vo, pp. 432. Philadelphia and London: F. A. Davis Co. 1893.

The scientific treatment of sexual perversities is a task attended with many difficulties, which principally centre upon the possibilities of confining it rigidly and solely to the domain in which it rightly belongs. The author has apparently striven conscientiously to overcome such an objection by adhering in his description and detail of cases and conditions to scientific terms and Latin quotations. To the medical jurist and the students of neurology and psychiatry the work will prove a valuable and suggestive one, while to the general practitioner it will open up an entirely new field for study and reflection concerning many of the hitherto hidden causes of general neuroses.

Handbook of Insanity for Practitioners and Students. By Dr. Theodore Kirchhoff. Illustrated with eleven plates. Pp. 362. Medical Practitioners' Library. New York: William Wood & Co.

Dr. Kirchhoff is a privatdocent at Kiel and physician to the Schleswig Insane Asylum. He has written a treatise on insanity which shows industry and study, and which represents fairly well the views of German alienists toward this branch of medicine. The translator has judiciously condensed the original work from a book of 550 to one of 360 pages, and some of the plates showing handwriting are left out as being untranslatable. The translator has done his work well, and has been particularly wise in not attempting to turn into English the terms "Wahnsinn" and "Verrüchtheit." The book is admirably printed, the plates showing the physiognomy of the insane are among the very best that we have seen. The work will be found a most useful addition to the general practitioner's library.

Hospitals and Asylums of the World. Their Origin, History, Construction. In four volumes and a portfolio. By H. C. Burdett. Vols. III. and IV., with a Portfolio of Plans. London: J. & A. Churchill. 1893.

With these volumes Mr. Burdett's monumental work on hospitals and asylums is brought to a close, and we hasten to congratulate the author on the completion of a task which must have seemed at its inception, thirteen years ago, almost insuperable, and which indeed few men, with less indomitable perseverance, would have been able to complete. The first two volumes of the work treated of asylums, and in the last two the history, administration, and construction of hospitals are considered. Volume III. deals with the history of hospitals, beginning with the times preceding the Christian era and coming down to the present century. In the fourth chapter the subject of hospital administration is taken up and discussed under three heads, according as it is run on the free system, the pay system, or the state and municipal system. The author has some very sound views on the demoralizing effect of the free system, but it sounds odd to hear him say that "there is relatively little free medical relief anywhere in America." If there is more free medical relief in England than here, we can only commiserate our English colleagues. Volume IV. treats in detail and at considerable length with the all important subject of hospital construction. The portfolio contains a large number of plans of American, British, and Continental hospitals. The work is one of which the author may well be proud, and of its value to everyone concerned in the administration or construction of asylums or hospitals there can be no question. Nothing of the kind that has ever been published approaches it in thoroughness, and it should find a place in the library of every public institution, and of every architect, and indeed in that of everybody interested in the management of hospitals or asylums.

Manual of Operative Veterinary Surgery. By A. Liautard, M.D., V.M., Principal and Professor of Anatomy, Surgery, etc., in American Veterinary College, N. Y. 12mo, pp. 786. Sabiston & Murray. 1892.

In this volume we have presented all the details of technique necessary for creating the horse a surgical patient, and for the treatment of the diseases requiring the use of instruments. The general principles of bandaging, the application of apparatus, although peculiar in themselves, the various methods of throwing and securing the animal, as well as a faithful description of the diagnosis and pathology of his surgical troubles, are very practically and thoroughly discussed by one who stands pre-eminent in his specialty. The illustrations are very numerous and serve their purpose at a glance.

Burdett's Hospital Annual and Year Book of Philanthropy for 1893. Containing a Review of the Position and Requirements, and Chapter on the Cost of Management of the Voluntary Charities, and an Exhaustive Record of Hospital Work for the Year. It will also be found to be the most useful and reliable guide to British, American, and Colonial Hospitals and Asylums, Medical Schools and Colleges, Religious and Benevolent Institutions, Dispensaries, Nursing and Convalescent Institutions. Edited by Henry C. Burdett, Author of "Hospitals and Asylums of the World," "Hospitals and the State," etc. London: The Scientific Press.

The scope of this excellent annual is well set forth in the title, to which we can add little, except to say that the claims there made seem to be fully justified by the contents of the work.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON GENERAL MEDICINE.

Stated Meeting, April 18, 1893.

CHARLES E. QUIMBY, M.D., CHAIRMAN.

Discussion on the Etiology and Treatment of Primary Anæmia.—

Hæmogallol in Anæmia of Malassimilation.—DR. W. H. PORTER read a paper on this subject. It was only recently, he said, that the etiological factors concerned in the production of anæmia had been at all adequately understood. For a long time iron had been prescribed for this condition in simply an empirical manner. Experience had shown that this agent was of unquestionable benefit in many cases, but it was also a fact that it was often disappointing in its results.

Cases of anæmia might be divided into three classes: First, those in which the administration of iron in almost any form is rapidly followed by a disappearance of the anæmic condition; second, those in which the use of all preparations of iron results in utter failure; and, third, those in which the anæmia is cured after all the preparations of iron have failed. The fact that there are these different classes of cases showed that anæmia is due to a large number of causes.

After dwelling for some time on the processes of assimilation and metabolism, Dr. Porter remarked that the chemical actions and reactions which characterize the physiological changes in the system were not yet fully understood. In order that the blood might be maintained in a normal state the following conditions were necessary: 1. A perfectly developed digestive system; 2, normal glandular activity; 3, a well-developed heart and a full complement of blood; 4, perfect respiratory capacity; 5, adequate innervation: 6, regular and uniform removal of waste.

A destruction or derangement of any one of these essential elements might be the starting-point of anæmia. A rapid loss of blood from hemorrhage, or a continual drain upon the vascular supply, were common causes of it.

The purpose of this paper, he said, was to deal with the causes of anæmia which were dependent on digestive derangements. As regards the normally constructed infant the question arose: How does it get its iron during the period of lactation? Recent investigations had shown that the milk of the mother contains an isomer of hæmoglobin. The absolute loss of iron in infant life was very small; so that the hæmoglobin in the blood was continually being augmented. After the period of lactation the giving off of iron was shown particularly in the growth of the hair.

It had been formerly taught that when iron was given in anæmia due to defective assimilation the iron was drawn by some mysterious process into the blood; but we now recognized the fact that the iron salts cannot be absorbed and taken into the blood. The therapeutics of iron were plain and simple. All the salts of iron seemed to act most efficiently if first converted into chlorides by the hydrochloric acid of the gastric juice; and this explained why the tincture of chloride of iron, when it could be taken, was, as a rule, the most satisfactory preparation in anæmia. A defective formation of the hydrochloric acid of the gastric juice had been shown to be one of the most common causes of anæmia. Defective secretion of bile was also a frequent cause. Such disturbances in the digestive system markedly affected the quantity of red corpuscles and hæmoglobin in the blood, and in the treatment of such anæmia simple improvement of the digestion was often all that was required to bring about a cure. The administration of iron and a little hydrochloric acid were sometimes, however, of decided benefit.

Last year Professor Kobert, of Dormat, had succeeded in obtaining two agents by the separation of oxygen from ordinary hæmoglobin, designated respectively as hæmol and hæmogallol, which had proved of great service in the treatment of anæmia. Since June last, Dr. Paton said he had used hæmogallol continuously in his practice, and he had found that in six-grain doses, given three times a day, it was attended with no disturbance of the system, and proved of the most marked benefit in cases which had resisted all other treatment. It had no bad taste and did not injure the teeth. It might be given in capsules, or in the form of tablets, or made up into chocolate confections. The latter he believed far preferable to all other forms, especially in the case of children, who took the chocolates with avidity.

Some Non-medicinal Remedies in Anæmia.—DR. SIMON BARUCH read a paper on this subject. He said that so long as the treatment of anæmia was associated in the minds of the profession simply with the giving of iron, so long would that treatment prove unsatisfactory. The idea that mineral agents can be directly supplied to the blood was fortunately now exploded. The amount of iron contained in the human system had been found to be only from fifteen to forty-eight grains, and in the worst cases of anæmia the amount of iron lost was only from three to four grains. This quantity a single pound of good beef would furnish. In just what manner iron was supplied to the hæmoglobin in the blood was not clearly understood, but we knew that the function of iron was respiratory, it was the great oxygen carrier of the body. Having referred to the change of venous to arterial blood, he said that lack of iron must necessarily interfere with the proper oxygenation of the blood.

He thought that greater success would attend the treatment of anæmia, as commonly practised, if more attention was paid to the etiological factors concerned in its production. Unfavorable environment was frequently met with in cases of anæmia, especially in children, and if a successful result was to be hoped for it was necessary that the physician should examine carefully into the school-life, the food, the digestion, the mental activity of the patient. It was of little avail to prescribe iron in a routine manner as long as unfavorable conditions of life persisted. Of prime importance in the treatment was an ample supply of oxygen, not artificially generated, but obtained from natural sources in the fields, the woods, the city parks. Among the poorer classes removal to a hospital was often of the greatest service, and it was sometimes wonderful to note the improvement in a factory girl with chlorosis, for instance, which followed her transfer from an unhealthy environment to the clean and well-ventilated wards of the hospital, with the rest and abundant supply of wholesome food furnished there. In many such cases it was not necessary to give iron at all.

It was often said that anæmic patients should take plenty of exercise. But active exercise was by no means advisable in a large proportion of the cases. The presence of dyspnœa and a weak heart contra-indicated this, and in its place there should be prescribed rest, passive exercise, and massage, as so successfully practised by Drs. M. Putnam Jacobi and Weir Mitchell. When exercise was prescribed, it should be in the most systematic manner, precise directions being given the patient in regard to the matter. In the same way precise directions should be laid down for the diet, so that the patient might have the benefit of methodical feeding.

In the next place, the application of water was of the greatest possible service. Cold baths, however, were not to be recommended. The patient, after being properly warmed—the warmth of the bed being often sufficient for this—should be given a bath at about 70° F. at first; the temperature of the bath afterward being decreased daily by two or three degrees. In the weaker cases the dry pack, followed by ablution, was advisable. Later, when the system had recovered its tone to some extent from this daily discipline, we might resort to the wet pack, the half-bath, and finally the rain-bath. In a case which had been referred to him for treatment by Dr. T. Gaillard Thomas, the hæmoglobin was increased by this means

from thirty per cent. to one hundred per cent. There was no class of cases in which hydrotherapy was more beneficial than in this. The good results which attended this mode of treatment were no doubt due to the stimulation of the nervous centres which was caused by it.

Finally, depletion was a most useful means of treatment. Thus, the hot-air bath was often of great service by its prompt action in removing excretions. Some of the older writers had advised repeated small bleedings in anæmia, and this practice had more recently been resorted to by Wilhelmji and others. While personally he had not yet tried venesection, he had been in the habit of ordering one or two diaphoretic hot-air baths once or twice a week in suitable cases, and with marked benefit. This method of treatment, he believed, was of special value in relieving vascular spasm.

In conclusion, Dr. Baruch said that he did not undervalue the use of iron and other medication in anæmia. He wished only to plead against the indiscriminate use of iron, and to emphasize the fact, now conceded by all the best authorities, that it is not absorbed into the blood. In the successful treatment of anæmia, diet, exercise, fresh air, rest, and baths, all contributed to the desired result.

The Chairman, Dr. Quimby, said that he had expected that a medical friend of his from Philadelphia, who had made a special study of the blood, would be present at the meeting and exhibit Hedin's hæmatocrite for measuring the red corpuscles, but, unfortunately, he had been prevented from attending. Dr. Quimby then referred to certain defects in the mechanical construction of the instrument, and offered some suggestions for increasing its efficiency.

The Clinical Study of the Blood in Anæmic Conditions.—Dr. Thomas S. Southworth read the paper. Having remarked that in pathological processes the red corpuscles of the blood suffer deterioration in various ways, he stated that in chlorosis the percentage of red corpuscles is relatively less than the percentage of hæmoglobin; in simple anæmia the percentage of red corpuscles and hæmoglobin is equal; and in pernicious anæmia the percentage of red corpuscles exceeds that of hæmoglobin. In anæmia the red corpuscles not only become diminished in number but altered in size, in shape, and in the capacity to form *rouleaux*. The size varied, so that we had normal cells, microcytes, and megalocytes. In pernicious anæmia the megalocytes predominated. In some cases crenation took place very soon. Decreased resistance kept pace with the entrance of the disease.

Having referred to the theories that had been advanced to account for the larger percentage of red corpuscles than of hæmoglobin in pernicious anæmia, he stated that in ordinary chlorosis the capacity of forming *rouleaux* was fairly preserved. In normal blood-corpuscles, after the period of intra-uterine life, nucleation did not exist; but this was found when anæmia was present. The nuclei were most numerous in the corpuscles of those who had suffered from severe hemorrhage, or from poisoning by such agents as arsenic and phosphorus. There were three forms of nucleated cells: the micro-blast, the normal blast, and the megalo-blast. The latter form was almost pathognomonic of pernicious anæmia.

In the study of anæmia careful distinction should always be made between primary anæmia and secondary anæmia, or that dependent on some organic disease, such as syphilis, cancer, tuberculosis, and cardiac and renal disease. It was too often the case that this underlying factor of the anæmia was not recognized; but in every case of anæmia such an underlying factor should be carefully sought for. If it could be excluded, the case would be simplified, and we would know that one had to deal with primary anæmia.

Anæmia, he said in conclusion, was not a local, but a systemic, disease. It should be treated by means of hygiene, diet properly regulated, exercise, and hydrotherapeutics, in addition to medication. Iron should be given in order to increase the amount of hæmoglobin in the blood. Arsenic was also of service in many instances. Its mode of action was not as yet clearly understood, but he believed that it produced its effect upon the blood-forming organs.

A New Preparation of Iron in the Treatment of Anæmia, with Effect Shown by Increase in Number of Red Corpuscles and Amount of Hæmoglobin.—Dr. H. P. Loomis related a series of experiments to determine the value of the pepto-manganate of iron (Gude's) in the treatment of anæmia. It is a well-known fact, he said, that in the hæmoglobin of the red blood-corpuscle manganese is always found. Opinions differ as to its significance. At the present time the majority of observers attribute to it an oxygenating function, some claiming that quantitatively it is more active than iron. It certainly gives off oxygen more readily than iron. Hence it has long been held that its introduction into the body would increase assimilation.

As early as 1838 Kugler recommended the manganese salts in scrofula, for he had noticed in chlorine bleaching establishments that those who handled the manganese salts enjoyed an immunity from diseases of the skin, bones, or glands. For a long time, and by a number of observers, manganese has been recommended in anæmia and chlorosis, as it has been found by analyses of blood in these conditions that the manganese is diminished in some cases proportionately more than the iron. In spite of the high recommendation from various sources of the theoretical indication for manganese in anæmia it has not been extensively used on account of the difficulty which attended its absorption. The various combinations of iron and manganese which I have employed have yielded far from satisfactory results; almost invariably they have produced digestive disturbances after a short time.

About a year ago my attention was called to a new combination of iron and manganese, which was being extensively used in Germany. Extraordinary results were claimed for the preparation in chlorosis and anæmia by Professor Ruehle, of Bonn, and Dr. Ascher, of Hamburg. I gave the preparation a careful trial, and the results obtained were exceedingly satisfactory. Believing, however, that the only accurate test of improvement in such conditions as anæmia is an increase in the amount of hæmoglobin and the number of red blood-corpuscles, I made a series of examinations in regard to this point. In most of the cases in which the preparation was given the blood was examined before, during, and after its use had been stopped. The Thoma-Zeiss apparatus for counting blood-corpuscles was used. At least three fields of sixteen squares each were counted from each specimen of blood, and the average number of corpuscles in each square obtained. In this way the number of corpuscles in each cubic millimetre of blood was estimated. This is the most accurate method of determining the number of corpuscles in a given quantity of blood with which I am acquainted. The normal number of corpuscles to each cubic millimetre of blood is estimated at 4,200,000.

The amount of hæmoglobin was estimated by Hénocque's hæmatoscope, and also by the spectroscope. In normal blood there is about fourteen per cent. or fourteen grains of oxyhæmoglobin in each one hundred grains of blood.

To thoroughly estimate the advantages of the preparation eight persons with marked anæmia were selected, and careful notes of the cases taken while under treatment. No other medicine was given. In some of the cases the results obtained were much better than had previously been obtained with other preparations of iron.

The preparation of iron and manganese referred to is what is known as the "Liquor Mangano-ferri Peptonatus Gudes"—or, as is written on a prescription, Pepto-mangan "Gude"—a clear, dark-sherry-colored neutral fluid, non astringent and of mild aromatic taste, prepared by Dr. Gude, a chemist of Leipzig. The dose prescribed was a tablespoonful after meals in milk or in sherry wine. It is claimed that the combination of the

iron and manganese with a peptone has decided advantages over the albuminate of iron in its permanency and ease of assimilation. Each tablespoonful of the mixture contained three grains of iron and one grain of manganese.

The following are the histories of the cases, with the results obtained:

Case I.—D. G——, female, aged seventy-eight, entered Bellevue Hospital suffering with pelvic cellulitis, the symptoms of which disappeared at the end of a week. The patient was fairly well nourished, but with an excessively pale, waxy color. Examination of blood showed eight per cent. of hæmoglobin and 3,900,000 corpuscles to a cubic millimetre. After thirty-four days taking the preparation the amount of hæmoglobin had increased to eleven per cent., and the corpuscles to 4,800,000.

Case II.—E. W——, aged seventeen, had the most profound anæmia after recovering from a severe attack of scarlet fever. Examination of blood showed six and one-half per cent. hæmoglobin, and 2,533,000 corpuscles to a cubic millimetre. After taking the preparation forty days, the amount of hæmoglobin had increased to ten per cent., and the corpuscles to 4,500,000.

Case III.—A. W——, female, aged twenty-two, had been excessively anæmic for over a year; complained of headaches, ringing in ears, dizziness, neuralgic pains; no organic lesion. Blood showed seven per cent. hæmoglobin and 3,520,000 corpuscles to a cubic millimetre, the corpuscles themselves were changed, some being microcytes and poikilocytes. After twenty-three days the treatment was stopped as the hæmoglobin was normal in amount and the corpuscles had increased to 5,000,000 to each cubic millimetre. The result in this case was the most pronounced of any.

Case IV.—Charles M——, aged twenty-one, subacute pleurisy lasting six weeks, very anæmic; no fever, some loss in flesh. Had taken syr. ferri iodidi for a month, with but slight improvement in general appearance. Hæmoglobin eight and one-half per cent.: corpuscles 3,800,000 to each cubic millimetre. At the end of twenty days, when the treatment was stopped, the hæmoglobin had increased one and one-half per cent., and the corpuscles to 4,600,000; the fluid in the chest had disappeared.

Case V.—F. B——, female, aged twenty-two, was admitted to the hospital suffering from insufficiency of the mitral valve. Presented the pale and anæmic appearance seen in cardiac disease. After the patient had improved so that she was up and about the ward she was put on the pepto-mangan. The examination of the blood at that time showed eight and one-half per cent. of hæmoglobin, and 2,600,000 corpuscles to the cubic millimetre. After taking the preparation twenty-five days the hæmoglobin was eleven per cent., and the corpuscles 4 000,000 per cubic millimetre.

Case VI.—B. M——, aged twenty-four, suffering from primary anæmia and menstrual disturbances. No organic lesion. Hæmoglobin ten per cent., corpuscles 3,000,000 per cubic millimetre. After taking the preparation forty-three days the amount of hæmoglobin remained at ten per cent., but the corpuscles had increased 1,200,000 per cubic millimetre.

Case VII.—C. V——, aged fifteen, presented the ordinary appearance of the anæmic girl at the age of puberty. No organic lesion. Hæmoglobin eight per cent., corpuscles 2,800,000. The examination of the blood after taking the pepto-mangan, forty days showed that the hæmoglobin was normal in amount, and that there were 4,000,000 corpuscles to each cubic millimetre of blood.

Case VIII.—M. M——, female, aged twenty-four; six weeks after ovariotomy; presented a markedly anæmic appearance. Had shown a slight improvement in color after taking Bland's pills for three weeks. These were stopped, and the iron and manganese preparation given. Examination of blood showed eight per cent. hæmoglobin, and 3,200,000 corpuscles per c.mm. After forty-eight days the hæmoglobin had increased two and a half per cent., and the corpuscles 1,300,000.

In most cases the pepto-mangan. had no constipating effect. Of the eight cases in which accurate notes were kept, all showed a marked improvement both in the increase in the amount of hæmoglobin as well as increase in the number of red blood-corpuscles. The average increase of the hæmoglobin was 2.2 per cent., and of the red blood-corpuscles 1,258,000.

Dr. S. H. Dessan said that in the treatment of anæmia by iron, whatever the particular preparation employed, it was important that the use of the remedy should be kept up for a long period, or else there would continually be relapses. It was for this reason, he supposed, that we heard of so many new preparations of iron. Physicians are all the time trying to get some form that would not disagree with a delicate stomach. All the various preparations were no doubt good; but there were other factors in the successful treatment of anæmia which were perhaps quite as important as iron. In the discussion this evening he had been waiting to hear something in regard to the necessity of paying attention to the condition of the alimentary canal, and especially to see that the bowels were kept open. This, he believed, was an essential point, and the old practice of giving aloetics with iron was founded on correct principles. In undertaking the treatment of any case of anæmia it was important to warn the patient that a prolonged course would in all probability be necessary to bring about a cure.

AMERICAN PEDIATRIC SOCIETY.

Fifth Annual Meeting, held at Cranston's Hotel, West Point, N. Y., May 24, 25, and 26, 1893.

First Day, Wednesday, May 24th—Morning Session.

The meeting was opened with an address of welcome by the President, Dr. A. D. Blackader, of Montreal, who reviewed and congratulated the Society on the excellent work accomplished since its beginning. He also dwelt on the important special work done in this branch of medicine in this country, and hoped for its continuation. Certain applications of practical medicine, *e.g.*, sterilization, and its perfection at Boston through the efficacy of Dr. Rotch, were worthy of especial mention. The methods of dealing with gastro-enteritis by irrigation of stomach and rectum were also referred to.

In all, about thirty members were present at the opening.

This Year's Failures in Diphtheria.—Dr. M. P. Hatfield, of Chicago, read a paper entitled "This Year's Failures in Diphtheria," in which he carefully quoted the history, etiology, and treatment of six cases of this disease, all of which proved fatal.

He was impressed with one fact in connection with the difference between intubation and tracheotomy, namely, that he preferred tracheotomy. The speaker made especial mention of the fact that Dr. Waxham did not claim much success from the direct result of intubation.

In the discussion Dr. Northrup took exception to the statement on intubation and insisted that intubation in proper hands was the only remedy when used early.

Dr. A. Jacobi mentioned the importance of naso-pharyngeal antisepsis. He believed that enlarged lymphatic glands situated below the angle of the jaw would reduce in size if the septic material of the nose was thoroughly washed away by some disinfecting lotion. There was a decided difference in the absorbing power of the nose as a secretory organ and the tonsils as excretory organs, and hence the vast difference in effect in gargling the throat and washing the nose. He further insisted that stimulation should be thoroughly carried out by alcohol, caffein, and strychnina.

Dr. J. Lewis Smith detailed the calomel fumigation as practised by him, in which he subjects a child from ten to twenty minutes every three hours to the action of ten to

twenty grains of calomel by fumigating from a tin plate by means of an alcohol lamp. He places the child under a tent and states that it is quite easy to salivate by means of this method, proving the systematic effect of the same.

Dr. Joseph Winters then asked whether it had been observed that an early tracheotomy or an early intubation would tend to check the downward spread below the cricoid cartilage of the diphtheritic membrane.

Peroxide of Hydrogen in Diphtheria.—Dr. J. Lewis Smith, of New York, next read a paper on the value of peroxide of hydrogen in diphtheria, in which he stated that the solution (15 volume) as ordinarily found had an acid reaction, which was accountable for the caustic properties attributed to it, and advised the addition of sodium bicarbonate.

A Case of Laryngeal Diphtheria.—Dr. N. D. Booker, of Baltimore, next followed with a paper entitled "A Case of Laryngeal Diphtheria, with the Demonstration of a Carefully Prepared Specimen." He outlined at great length the fatal case, giving his pathological and bacteriological methods. Then followed a general discussion, which was participated in by Drs. Caillé, Fruitnight, Winters, Jacobi, Northrup, Seibert, of New York, J. Lewis Smith, and Koplik.

Second Day, Thursday, May 25th—Morning Session.

The meeting was called to order at 9.30. Dr. Blackader in the chair.

Antipyretic Drugs in the Febrile Affections of Children.—The first paper was read by Dr. J. P. Crozer Griffith, of Philadelphia, Pa., entitled "Brief Notes on the Use of Antipyretic Drugs in the Febrile Affections of Children." The author believed that children could easily bear high temperatures and that the only and proper time to interfere was when nervous symptoms resulted therefrom. He believed that under the present enthusiasm for cold water in treatment of pyrexia the chemical antipyretics were forgotten. Antipyretics were borne in proportionately larger doses than adults. He had used thallin in two-grain doses in a child which, previously delirious, soon gained consciousness.

Dr. A. Jacobi's paper, entitled "Intestinal Fevers," was next read by title.

Next followed "Report on a Revisionary Nomenclature of Gastro-Intestinal Diseases," by T. M. Rotch, M.D., of Boston, Mass.

The discussion was opened by L. Emmet Holt, M.D., of New York. The discussion of the elimination of such words as dysentery, diphtheritic, and gastro-intestinal, and the substitution of gastro-enteric for the latter. The employment of words which would more properly designate the seat of the lesion rather than the whole part of a viscus, as in the gastro-intestinal, was mentioned.

Finally it was decided, owing to the difficulty of arriving at a definite conclusion, to defer the report until next year, hoping by active co-operation of all members of the Society to definitely settle the question.

Proctitis in Early Infancy.—Dr. Louis Starr, of Philadelphia, Pa., read a paper on this subject. The author cited some interesting cases which showed the distinct independence of inflammation of the lower end of the intestine. One case was cited where the patient had a clean tongue, moderately good appetite, very slight febrile reaction, symptoms of general health failure in the way of wasting, pallor, and prostration. There is a history of frequently increasing small bowel movements that are expelled by a straining effort, which the facial expression and fretful cries show to be painful.

The skin around the anus will be shown to be reddened, and if the lower portion of the rectum be everted, a feat easily accomplished by lateral pressure of the thumbs placed on either side of the anus, the exposed mucous membrane will show intense redness and superficial linear ulcerative patches. The evacuations were composed of greenish or brownish mucus. The author believes meconium to be an irritating factor by accidental introduction into the rectum during delivery.

This condition is most successfully righted by deep cleansing injections of salt water— ʒ ss to ʒ j of salt to eight ounces of water—at temperature 98° F., from a fountain syringe held not high, but merely to allow the fluid to enter freely without force or unusual pressure. After the latter injection follow up with a bland enema of olive-oil, which should be retained (ʒ ij. would be enough).

Drs. Fruitnight, of New York, Christopher, of Chicago, and Koplik, discussed the paper.

Dr. Jacobi, of New York, in discussing, stated that although the prostitis may exist as a primary affection it frequently was caused from an inflammation which existed higher up in the intestine and travelled (spread) downward toward the rectum.

Parental Transmission of Tuberculosis.—Dr. J. M. Keating, of Colorado Springs, sent a paper entitled "Plausibility of the Transmission of Tuberculosis from Parent to Infant." Paper was read by the Secretary, Dr. S. S. Adams, in absence of Dr. Keating. The author believed that puerperal women, mentioning especially the site of the placenta as an infecting focus, could transmit directly to their offspring through their blood. Then external influences, genital infection from peritoneum, etc. It was found by experiment that tubercle bacilli existed in the testicle, *i.e.*, testes of man, but were not found in the semen. As syphilis is transmitted so the author believes tuberculosis to be transmitted.

Dr. A. Jacobi, in discussing the above paper, quoted Paris's "Congress of Tuberculosis," in which seven or eight undoubted cases of direct transmission were reported.

Dr. Osler, of Baltimore, read a paper on "Acute Scleroderma," which was very interesting, and thoroughly discussed by Drs. Northrup—who cited case of stone baby—A. Jacobi, and Koplik.

Nomenclature of Diseases of the Mouth.—Dr. T. M. Rotch, of Boston, read a paper on this subject.

The discussion was opened by Dr. F. Forchheimer, of Cincinnati, who classified the diseases as follows: Stomatitis catarrhalis; Stomatitis mycotica (thrush membranosa); stomatitis ulcerosa, aphthosa, gangrenosa, syphilitica.

Dr. Forshheimer stated that stomatitis ulcerosa is frequently of chemical origin, and therefore the division into mycotic and catarrhal could not be maintained, not excluding the possibility that some of the other forms may be of chemical origin. Stomatitis ulcerosa was caries; stomatitis gangrenosa was necrosis. He used the term stomatitis membranosa instead of stomatitis crouposa and stomatitis diphtheritica, owing to the difference of opinion between pathologists and clinicians about diphtheria and croup, especially so when croup or diphtheria exists in the throat and spreads to the mouth.

Drs. Holt and J. P. Crozer Griffith wished the name of thrush retained.

Dr. A. Jacobi believed that aphthæ was looked upon as stomatitis, and due to presence of oïdium albicans or sometimes streptococci, sometimes to diphtheria bacilli. He also believed the name of thrush should not be dropped.

Tusculum is the name of a new educational periodical published by the Rugby Academy of Philadelphia. It is intended as a guide to the teaching of Latin and Greek as they should be taught, *i.e.*, colloquially, and to judge from the first number it is admirably adapted to this end. If Latin or Greek is ever to become the language of science, it will have to be taught colloquially just as French and German are now taught, and until a knowledge of one or both of the ancient tongues is so imparted to the student we can never hope to see either adopted as a medium for scientific expression. Any who are interested in the proper study of these grand old languages would do well to look into the Rugby system of teaching them.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 22, 1893.

H. P. Loomis, M.D., President, in the Chair.

A Lipoma in the Inguinal Region.—Dr. Warren Coleman presented a lipoma which had been removed from a man about sixty years of age, a patient in the almshouse. There was no history bearing on the condition. Inspection of the body showed a swelling in the left inguinal region about the size of a hen's egg, which appeared to be a hernia, but careful dissection failed to show the presence of a sac. The mass was of a deep red color, and was divided into two lobes, which seemed to pass up through the inguinal canal. On opening the abdominal cavity, the intestine was found over the internal ring, but perfectly free, and the omentum was of normal length, and its free border perfectly intact. The finger, passed up through the external ring, could detect an isthmus connecting the two lobes, and beyond this the internal ring was found closed by peritoneum. The tumor lay a little internal to the spermatic cord and its vessels; though there was some compression of the latter, as shown by the tortuous condition of the spermatic veins, there was no varicocele.

An examination of the tumor showed it to be deeply congested, hard to the feel, and surrounded by a thin but distinct capsule, which was easily stripped off. This, the speaker thought, was probably not peritoneum, as it closely invested both lobes and the isthmus. Running down into the inner lobe was a sort of canal without any apparent connection with the abdominal cavity. On section the tumor was seen to be traversed by small fibrous trabeculæ, and the surface of the tumor was bright and glistening. The real nature of the tumor was obscured by the large amount of blood it contained, but under the microscope it was shown to consist wholly of fat-cells held together by bands of fibrous tissue. The fat-cells were large, and running in among them were numerous blood-vessels. In some places the cells were entirely surrounded by capillaries distended with blood.

Inguinal epiploceles are most frequent in old people, and on the left side, and when of long standing their structure may be entirely changed, as, for instance, in a case reported by Macfarlane, in which it "had lost every vestige of its natural structure, and had become exceedingly bulky, indurated, and tuberous." But the fact that there was no sac surrounding this tumor, and that the free border of the tumor was intact, makes it improbable that the fibrous capsule surrounding the lobes individually was the remains of the sac. The external appearance of the tumor made it resemble an enlargement of a portion of the spermatic cord, but the dissection showed the cord to be entirely distinct from the growth. Cases have been recorded of fatty tumors which have developed external to the inguinal canal, and of the formation of such tumors in the cellular tissue below the peritoneum in the neighborhood of the internal ring, and of their subsequent extrusion. The results of the post-mortem examination, when taken with the examination of the tumor itself, leave little doubt but that this fatty tumor was developed independently of the omentum.

Adhesive Pericarditis.—Dr. J. H. Huddleston presented a specimen of adhesive pericarditis which had been removed from a woman dying of pneumonia. The pericardium was very extensively adherent over the back of the heart; there were no adhesions about the lungs.

Dr. Huddleston also presented several other specimens removed from a woman fifty-five years of age, who died presumably of pneumonia. The post-mortem examination showed two small areas of pneumonia surrounding an infarction. A clinical diagnosis had been made of fracture of the neck of the femur, and at the time of death the patient was wearing a spica bandage. At the autopsy it was evident that there was limitation of all the motions about this joint, and some of those present thought they felt a slight crepitus. On excising the head of the bone and making a section through it, it was found that there was no fracture, but that there were osteophytes, and a state of chronic arthritis and osteitis which may have given rise to the crepitus. The uterus from the same patient was found enlarged to the size of a large orange, and the left Fallopian tube was moderately dilated. On opening the uterus, there was a gush of odorless pus, and it was found that the whole uterine cavity had been converted into an abscess cavity. An *ordinary* microscopical examination showed nothing peculiar about this pus. On the intestine, mesentery, and omentum were a number of small, white, elevated spots, of which no microscopical examination had yet been made. The lungs presented no evidence of tubercle; the bronchial and abdominal glands were not notably enlarged, and no evidence of tuberculosis had been found, unless the uterus and tubes were proved to be tuberculous.

Dr George P. Biggs said that all the specimens of tuberculous uteri which he had seen had shown a distinct cheesy layer and a thickening of the wall, instead of a thinning, as in this specimen. The nodules in the mesentery resembled tubercle.

The specimen was referred to the Microscopical Committee for examination and report.

Epidemic Cerebro-Spinal Meningitis.—Dr. George P. Biggs presented a brain and spinal cord removed from a negro laborer, twenty years of age, who had been in perfect health up to March 18th, at which time he had a chill, followed by headache and delirium. On the 20th, he was admitted to the New York Hospital in an unconscious condition, with marked rigidity of the head, neck, and back, but there was no paralysis and no convulsions. On the following day he roused sufficiently to answer a few questions, and then again relapsed into coma. His pulse was rapid and feeble throughout, and the temperature did not go above 101°. At the autopsy, a purulent exudation was found over the base of the brain, especially between the lobes of the cerebellum and along the course of the vessels over the entire convexity. On removing the spinal cord, no exudation was found until a point just below the cervical enlargement of the cord was reached, when a purulent exudation was discovered, and found to extend downward over the whole posterior surface of the cord.

Dr. Biggs also reported in this connection another case of the same disease which developed in another negro of about the same age, who lived in the same house with the other patient, and was his companion. He was taken sick on March 17th, but there was no distinct chill, and no noticeable rigidity of the back and neck. The pulse was rather rapid and feeble, the temperature about 101°, and he appeared simply stupid. He died rather suddenly, before a diagnosis had been made. At the autopsy, the lateral ventricles of the brain were found to contain turbid serum, and the entire surface of the brain showed acute purulent lepto-meningitis. The pia of the cervical region was free from exudation in this case also.

The ileum from this patient was also exhibited to show an unusually deep pigmentation of Peyer's patches. The pia of the medulla showed the pigmentation most commonly found in colored people. Cultures from this patient's brain, at the end of twenty-four hours, showed apparently a pure culture of a comparatively large bacillus, but its nature had not yet been determined.

Dr. J. M. Byron said that in view of the fact that while most cases of epidemic cerebro-spinal meningitis are believed to be due to the pneumococcus of Fraenkel, a few cases had been attributed to the presence of Wechselbaum's bacillus, it would be specially interesting and important to subject the specimens just presented to a very careful microscopical examination.

Strieture of the Rectum; Perforation Produced by Dilatation.—Dr. George P. Biggs then exhibited a specimen of extensive stricture of the rectum occurring in a woman forty years of age. The first symptoms apparently dated back about nine months, at which time an obstruction was first noticed. No specific history could

be obtained. From time to time she had been temporarily improved by dilatation of the stricture by soft bougies, but after the last dilatation, about four days before her death, she complained of so much pain that she was brought back to Bellevue Hospital. Examination showed beginning peritonitis. At the autopsy, the lower four inches of the rectum were found to be very tightly strictured, and the wall of the rectum fibrous and thickened. The mucous membrane over the strictured area was completely destroyed. About one and a half inch above the upper level of the stricture, and on the right side of the gut, was an opening about the size of the head of a pin, which was evidently the base of an old ulcer. Just to the left of this point the mucous membrane showed a distinct and recent tear. In all probability, therefore, the perforation was due to the point of the bougie catching in the gut at the site of this old ulcer. The stricture was evidently not malignant, and apparently not specific, but its exact nature had not yet been determined.

Inguinal Hernia; Perforation of the Jejunum.—Dr. George P. Biggs also presented a piece of jejunum which had been removed from a man, forty years of age, who had had a reducible inguinal hernia of the right side for a number of years. The hernia had never given him any trouble. In a friendly scuffle the hernia was compressed by the knee of his antagonist, and he almost immediately experienced so much pain that he was sent to the hospital. He rapidly developed an acute general peritonitis, and died in thirty hours. At the autopsy, a number of minute points of superficial ulceration were found in the lower part of the jejunum, and one ulceration, which was deeper than the rest, exhibited a perforation about one-fourth of an inch in diameter.

A Rapid Filtration Apparatus for Agar-Agar and Gelatine.—Dr. J. M. Byron exhibited an apparatus which he had devised for the purpose of facilitating the troublesome process of filtering agar agar and gelatine. It consists of two concentric brass cylinders placed the one within the other so as to form between them a steam-jacket. This space communicates with the interior of the inner cylinder only by means of several holes at the upper part. When it is desired to filter agar agar, a brass tube, having a sieve at the bottom to strain out the coarse impurities, is screwed into the cover of the inner cylinder, and it is long enough to dip down into the solution to be filtered, which is contained in this inner cylinder. This brass tube is filled with animal charcoal, and the filtered liquid, as it escapes from the top of this tube, is conducted away into any desired receptacle. The outer cylinder is provided with a safety-valve, and with a funnel and stop-cock. Water is poured through the funnel into the outer cylinder and is there heated to boiling, the steam escaping through the open stop-cock and funnel. When it is desired to filter the liquid in the inner cylinder the stop-cock is closed, and then the pressure of the steam forces the fluid through the tube containing the filtering material and out by the central tube. If desired, a Pasteur filter may be substituted for the central tube containing the animal charcoal.

Hemorrhage into the Supra-Renal Capsule.—Dr. Smart, present by invitation, exhibited a specimen showing hemorrhage into the left supra-renal capsule. It was taken from a child who died eighteen hours after birth from extensive pulmonary atelectasis. He asked if such a hemorrhage would be likely to give rise to symptoms.

The President said he had seen it in the adult, and so far as he knew, it did not give rise to any symptoms.

Dr. Thomas S. Southworth said that only two such cases had been brought to the notice of the Society in the past five years—one by Dr. Prudden in 1889, and the other by Dr. Hodenpyl in 1890. Both cases occurred on the right side, and the capsule was ruptured. In neither case was there a history of instrumental delivery.

Dr. George P. Biggs said that he had recently seen a case in which the entire supra-renal capsule was infiltrated with blood, which formed a layer about half a centimetre in thickness. It apparently occurred a short time before death, and had no bearing on his general condition.

Biliary Abscesses of the Liver.—The President presented the liver from a woman, forty-six years of age, who was admitted to Bellevue Hospital on March 16th. She was intensely jaundiced, and in a semi stupid condition, so that no history could be obtained from her. After her death it was learned from her friends that for the past two years she had had some trouble with her liver, and that during the last six months she had been quite ill, complaining most of the time of pain in the hepatic region, which was increased by the slightest motion. During these six months the jaundice had been constant. The patient's temperature was about 102°, most of the time she was in the hospital, up to the time of her death on the day following her admission. The autopsy was made sixteen hours after death, and all the organs were found in a normal condition except the liver and spleen. The latter was soft and of a bright red color, and was greatly enlarged, weighing one and one-eighth pound. No abscesses or structural changes were found in it. The liver weighed four and three-quarter pounds, was of a greenish-yellow color, and its surface somewhat uneven. Just beneath the capsule were several whitish areas of varying size, from a pea to a small olive. On section, these small spots were found to be collections of greenish yellow pus. The gall-bladder was enormously distended with gall-stones; the common duct was not completely occluded, and this duct, as well as the hepatic ducts, were dilated far up into the substance of the liver, and filled with small stones or gravel, and their walls presented evidences of purulent inflammation. These dilated ducts communicated with a number of small pus-cavities in the substance of the liver, as well as with those seen on the surface of the organ. One hundred and twenty stones, varying in size from the head of a pin to one and a half inch in diameter, were removed from the gall-bladder and the ducts, and microscopical examination showed them to consist of cholesterine crystals and bile pigment blended with an amorphous mass. Cultures were made from the pus found in one of the small superficial abscesses, and these showed only one small, short bacillus with rounded ends, similar in form to the typhoid bacillus, but shorter. Plate cultures were exhibited, showing the rounded concentric colonies formed by the bacillus, which in its growth liquefied gelatine.

The speaker said that it was difficult to determine whether or not this bacillus bore any causal relation to the abscesses. It is possible to conceive of micro-organisms entering the gall-bladder from the intestines, and finding a suitable soil for development in the inflamed and eroded mucous membrane. The infection of the liver was unquestionably by continuity along the ducts.

Dr. Byron said that this bacillus resembled very closely a bacillus discovered by a certain physician, and found by him to be associated with yellow fever. It can usually be found in all the organs of the body some hours after death. It is now well known that certain irritants, when injected under the skin, can produce suppuration without the presence of any pyogenic germ; they act like these germs, causing by their irritation of the tissues the migration of leucocytes. This is the explanation of the formation of what are known as "non-infectious abscesses."

Dr. George P. Biggs said that in a recent case of biliary obstruction, at the time of performing an operation for the establishment of an anastomosis between the gall-bladder and the intestine, the surface of the liver was seen to be covered over with numerous white spots, similar to those seen in the specimen just presented. At a subsequent operation these spots were found to have entirely disappeared, and this suggested the idea that these spots were collections of leucocytes in the dilated ducts, and their disappearance was due to the relief of the obstruction. In this case there was no evidence of any recent abscess formation.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE RELATIONS BETWEEN LETTERS AND MEDICINE—ORATION AND CONVERSAZIONE AT THE MEDICAL SOCIETY—PARTIAL EXCISION OF THE LARYNX—SPASTIC PARAPLEGIA—CONTRACTED HANDS—ABLATION OF SCAPULA—EPITHELIOMA—CLINICAL SOCIETY'S REPORT ON INFECTIOUS DISEASES — PSOAS ABSCESS — BLOODLESS METHOD OF EXCISING TONGUE—PERFORATING GASTRIC ULCER—THE EFFECTS OF EXCESSIVE EXERTION—ATHLETICS—DISINTEGRATION OF THE BLOOD—OF MUSCLE—PTOMAINES—CHEMICAL CHANGES—UTERINE MYOMA—THE LOCHIA — HÆMATOSALPINX — PAPILLOMATOUS GROWTHS OF OVARY AND PERITONEUM—TUBERCULOSIS OF FALLOPIAN TUBES, ETC., IN A CHILD—HAMMER TOE — PERFORATION OF ŒSOPHAGUS AND AORTA—PARASITES OF CANCER.

London, May 5, 1893.

This year's oration at the Medical Society was duly delivered on Monday to a crowded and appreciative audience. The orator, Professor Mitchell Banks, discoursed on the relations between medicine and letters in a manner which elicited applause and laughter, while it chained the attention of the listener. Poets, philosophers, and scholars, who have been medical men, were aptly cited to show that in spite of the nature of medical studies and practice, we stand foremost of the three liberal professions in the number of distinguished literary men who began life in our ranks. Then comes the question whether we are maintaining the standard of general learning and varied knowledge which shall enable us and our successors to hold the place of honor. A regretful no must be the reply of all who have much experience of medical education as it is, and the orator admitted that the accomplishments, mental culture, and extent of reading of our profession are not at present as extensive nor as high as they ought to be. He found three causes for this: First the inferior school training of so many students, to which the attention of the general medical council should be directed. The preliminary examinations must be defective when those who pass them are disgracefully ignorant, not only of the literature of their own language, but of elementary grammar and even spelling. No wonder that a correctly written prescription is so rarely to be extracted from senior students. The second cause is this: as soon as medical study begins, its absorbing nature and the necessity of devoting much time to it is so urgent, that general reading is not unnaturally neglected for the text-books which will tell at the examinations. In the five years thus consumed, the love of letters may be lost. Then, thirdly, the arduous nature of practice and the necessity of earning a living succeeds. But still a love of letters should be cultivated. If lost it must be regained, for if life lasts the time must come when ambitious toil or money-getting cease to satisfy, when a well-lined pocket without a well-stored brain cannot give enjoyment to old age. La Bruyère was right when he said man often employs the greater part of life only to make the remainder miserable.

Recognizing the really great position which medicine holds to-day, the orator looked forward to a still greater one in the future, when it will be even more incumbent on her followers to show themselves worthy of her; and we shall not be worthy of her unless we are something more than prescribers of physic and healers of wounds. "In my youth," said he, "I had it strongly recommended to me to stick to my profession and leave everything else severely alone. The life of a medical man was to see patients, do operations, order drugs, and collect fees. I thank God that I entirely repudiated this idea of my profession." Many other good things did Professor Banks include in one of the most striking and delightful of the orations annually delivered before this Society.

After the oration the session was wound up with the presidential reception, at which music, light refreshments, and the floral decoration of the rooms added to the pleasure of conversation.

There were some interesting cases to be seen at the Clinical Society on the 28th ultimo, *e.g.*: A man on whom tracheotomy was performed two years ago for sudden, intense dyspnœa. Later on he was seized with a similar attack, and it was found that a good deal of cicatricial tissue had been formed obtruding into the lumen of the larynx. Some difficulty being found in removing the tube, the thyroid cartilage was divided and the right vocal cord, which had been observed to be quite fixed, was dissected away with a quantity of the cicatricial tissue. A piece of necrosing thyroid cartilage was also removed.

An analogous case was also to be seen in a man on whom tracheotomy was performed suddenly for dyspnœa caused by a mass of growth in the larynx, together with a swelling behind and external to the right, pushing the larynx over to the left. In September there was a swelling in front of the neck, traced to growth from the anterior surface of the posterior part of the cricoid cartilage. Both the arytenoid cartilages, together with those of Wrisberg and Santorini, part of the thyroid, both vocal cords, and most of the laryngeal mucous membrane were accordingly excised. The growth weighed 11½ drachms. The man made a rapid recovery and speaks with an artificial larynx.

A girl five years of age was shown as a case of pseudo-hypertrophic paralysis, though it was suggested that it was one of spastic paraplegia of intra-uterine origin. The child had never had proper use of her legs, and goes upstairs on all fours. The reflexes are brisk, but there is no ankle-clonus.

A Polish woman who had been frightened as a child of seven, and since suffered from various hysterical symptoms, was shown with contraction of the hands, together with anæsthesia. There is also limitation of the field of vision and loss of color perception in the right eye. It was stated that the patient was very susceptible to hypnotism, under which the contraction yielded for a time.

A girl, aged fourteen, on whom total ablation of the left scapula for sarcoma had been performed, exhibited a very good result. So did a man for whom a plastic operation had been performed a few weeks ago for epithelioma at the angle of the mouth. A butcher, aged thirty-four, who, after influenza and double pleurisy, had stiffness and thickening of the articulations of the hands and of the flexor tendons, was also shown.

Dr. Broadbent presented to the Society the report of the committee on periods of incubation and contagiousness of certain infectious diseases. This report, forms a goodly volume, and will no doubt attract a good deal of attention, as it not only comprises conclusions, but gives the facts on which they are founded, so that everyone may form his own opinion. This report is well worthy of a place beside others which have emanated from this Society.

A case of psoas abscess was related by Mr. Benham, which proved fatal through renal complications, the ureter being found at the autopsy twisted and obstructed. Mr. C. Heath then described a bloodless method of removing the tongue, the preliminary part of the operation being Whitehead's. A case of abdominal section for perforating gastric ulcer was then related by Dr. Dickenson and Mr. Haward. The operation was performed fourteen hours after the acute symptoms appeared, and an ulcer was found which admitted the finger, but owing to infiltration and thickening of the gastric wall did not admit of excision. A gastric fistula was therefore formed, and for some days the patient did well, but pneumonia set in and proved fatal. At the autopsy, the condition of the abdomen was satisfactory. An abscess at the base of the left lung with a small diaphragmatic empyema was the fatal complication. As perforation is almost always fatal, unless previous adhesions have formed, the authors

advised immediate section, excision of the ulcer if possible, and suturing the gastric opening. They also drew attention to the frequency with which inflammation spreads from the under surface of the diaphragm to the pleura and the lung above.

London, May 13, 1893.

Last Tuesday Dr. Dukes brought before the Royal Medical and Chirurgical Society, the case of a lad who died last autumn in a public school run. The sudden death of the lad while running caused considerable discussion at the time, and the interest in Dr. Dukes's paper was naturally great. At the autopsy all the organs were healthy, but there was disintegration of the blood. Dr. Broadbent remarked that it was known that the blood of hunted animals and those which were greatly fatigued underwent changes and their bodies rapidly putrefied, and he thought the fatal issue of this case was probably due to similar changes. The term "disintegration of the blood" was objected to by Mr. Golding-Bird, who attributed the death to ptomaïnes in the blood from the disintegration of muscular tissue. He even thought that what athletes call "getting a second wind" was due to the establishment of a tolerance of such fatigue products. This view was rejected by Dr. William Hunter, who said that profound changes in the blood did take place was shown by diminished alkalinity and the presence of lactic and sarcolactic acids. Leithin and phosphoric acid had also been found. The effect of carbonic acid was also remarkable. Excess of this gas caused disintegration of hæmoglobin, of the plasma, and of the stroma of the corpuscles. The coma met with in excessive fatigue resembled that of diabetes. Mr. Morgan suggested that the meal taken before the run had something to do with the result. Dr. Moore referred to the researches of Seitz, who had shown that unsuspected changes in the muscular fibres of the heart were fouud in such cases. Dr. A. Waller thought we had not facts enough to support the theory of disintegration, and that the gray matter of the brain as well as the blood should be examined in such cases. It will be seen that the subject requires more attention, as our physiologists are as uncertain as our clinicians, and the cases are happily rare. I am, therefore, glad to report that investigations are promised by the Cambridge physiological library; for it is important that athletics should not be discouraged. They should, however, undoubtedly be more carefully supervised and kept within the capacities of the boys. Moreover, the boys should be classified according to their ages and development—a simple matter very seldom attended to.

After this discussion a case of large cystic myoma of the uterus was related, but the discussion on the case was adjourned.

At the Obstetrical Society, on the 3d inst., Dr. A. E. Giles related the result of investigations on the quantity of lochia after labor. The method adopted was to weigh absorbent pads before and after use, and to estimate the discharge and clots removed by douches. He found the quantity to be about ten and a half ounces in an average duration of nine or ten days. The difference between this and Gassner's result of fifty-two and a quarter ounces was attributed to antiseptics and astringent douching. Among other conclusions, the author found the weight of the placenta, but not of the child, influenced the discharges. The quantity also increased with the amount of hemorrhage during labor, and the quantity was greater in dark than in fair women. Dr. A. Routh remarked on the possible fallacies in the paper. Evaporation should be liberally allowed for, and the amount of *débris* escaping during micturition and defecation must be considerable. He had shown that the size of the placenta was not independent of the size of the child. Dr. Boxall said in one hundred cases he found that when there was a rise of temperature, the lochia were prolonged from an average of 9.5 to 11.7 days. Dr. Horrocks thought that as all the author's cases were treated with antiseptic douches they could not be called ordinary labors. The President (Dr. Herman) held that the cases thus treated were more natural than when no care was taken to prevent the access of microbes. In the days when Gassner made his observations the German lying-in hospitals were in a sad state, and no doubt many of the patients had endometritis. Some portion of the lochia came from the vagina which had been stretched and bruised, and this would be lessened by astringent injections. In both series there must be sources of fallacy. How could they be obviated? In reply, Dr. Giles said the evaporation could not come to much as the discharge seldom reached the outside of the pad.

After this discussion Dr. L. Knaggs related an unusual care of hæmatosalpinx. At the operation a small pouch was found at the end of the left broad ligament, firmly fixed to the brim and sides of the pelvis, the ovary constituting the posterior and lower surface. This pouch communicated with the Fallopian tube, of which the uterine extremity was patent. This explained the way in which recurrent discharges, some of blood, others purulent, had at intervals occurred. The patient made a good recovery.

On the 2d inst. there was a good show at the Pathological Society. Dr. Pye-Smith reported the case of a patient who had been tapped several times for ascites, and died after one of these tappings, with high temperature. Previously an exploratory puncture had been made and a small piece of tissue withdrawn. As this was papillomatous it was thought the case was an ovarian growth which had become disseminated and no operation was done. Mr. Sydney Jones said such peritoneal growths often gave no further trouble after the abdomen had been opened. Dr. Cullingworth cited cases in which the peritoneal growths had subsided after removal of such diseased ovary as that shown by Dr. Smith. A case reported by Mr. Doran, some years ago, shows that after removal of the main growth, atrophy of peritoneal growths may occur.

Mr. Morton reported a case of tuberculosis of Fallopian tubes, uterus, and vagina in a child. It was as usual secondary to pulmonary tuberculosis. Specimens illustrating the anatomy of hammer toe were shown by Mr. Howard. Others, illustrating repair of tendons, by Mr. Tubby. A rather rare specimen, perforation of the œsophagus and aorta by mediastinal sarcoma, was shown by Dr. White.

But the most interesting exhibits were microscopic sections and drawings of a tumor from a cat's lip, shown by Mr. Jackson Clarke, who held that they completely confirmed his conclusions as to the parasites of cancer. Of his researches on this subject I have given an account in a former letter. Dr. Ruffer on this occasion denied that Mr. Clarke's specimens showed the appearances he described. The pathologists seem unable to make any nearer approach to each other's views on the parasitism of cancer.

The annual general meeting of the Pathological Society will be held on Tuesday next, when we are to have the report of the Morbid Growths Committee on the specimens of Mr. Jackson Clarke and others. There will be also an exhibition of other specimens and the election of officers for the next year.

Dyspepsia and Beef Tallow.—Dr. Park Holland, of Hyattville, Wyo., writes: "I have found that in any gastric trouble accompanied by the eructation of gas—sour or otherwise—a liberal use of beef tallow to the exclusion of all pork fat (lard) is an excellent remedy. Beef tallow is rendered the same as lard—salt added, after skimming. This will keep it sweet and wholesome in the warmest weather. Use this in the kitchen in place of lard. A person who is inordinately fond of 'grease' can saturate his food in this, with no resulting 'belching.' I treat the alternating diarrhœa and constipation in the ordinary way, peculiar to each case, and find I save the patient much time and distress."

BERI-BERI IN JAPAN.

To the Editor of the Medical Record.

Sir: The item from the *Sei-I-Kwai Medical Journal*, quoted in the Medical Record of May 20th, "The wards for kakké cases of the University Hospital were closed last month as there was not any patient," has been taken by you in a quite erroneous manner. You think that this is the end of the disease, and that within the University Hospital ward the door has been shut forever upon kakké. You must know that this door-shutting, not in the University Hospital alone, but in all the hospitals of Japan, is of regular occurrence. Every year the disease goes into vacation during the autumn and winter months, and there is no application of kakké patients, none whatever, until the monsoons in spring arrive fraught with southern moisture. From the beginning to the end of the year, the conditions of the climate, in regard to kakké, are represented by the following facts:

During January, February, March, which in Japan are the winter months, north and northeast winds prevail, and the average relative humidity of the atmosphere is from sixty to sixty-five per cent., very low as compared with the kakké months.

In April, the first spring month, the south and southwest winds come in, and in consequence, the average humidity increases seventy-two to seventy-five per cent. It is then, and not till then, that kakké patients begin to show themselves at the hospitals.

In May, south and southwest winds prevail; the dampness increases. The number of the patients increases *pari passu*.

June, July, and August, are the heaviest kakké months. During that season, the hottest of the year, south and southwest winds prevail, and humidity reaches its climax—an average of eighty-two to ninety per cent.

In September, the last summer month, the heat abates, and the wind blows less uniformly from the south; it blows even occasionally from the north. However, the hygrometric conditions show little change. The climax of the disease has been reached, as I said before, in August; there is, therefore, in September no increase, but, on the other hand, no decrease either; it remains stationary until October.[1]

October is the first autumn month; there is a drop of twelve degrees of the temperature, due to a change of winds; these come now regularly from the north, northwest, or northeast. However, the dampness persists. The only kakké applicants now are convalescents; there are no new cases.

November (that is the month when, according to your item, the University Hospital door was closed upon kakké) is the pleasantest month of the year. Winds north and northeast, barometer at the highest level it ever attains. Very little dampness left. It is the month set apart for travelling; even convalescents could not be kept within the enclosure of a hospital.

December is the last of the three cool autumn months. North and east winds, barometer very high, little dampness, chilly nights already. The proverb says: In December the doctor's house is shut (not only the hospital ward).

You see that the disappearance of kakké patients in November has nothing to do with "the stamping out of beri-beri in the Japanese navy." Let me add that the dietary reforms introduced by Dr. Takaki are by no means generally admitted to be the cause of the disappearance of kakké in the navy. This is almost exclusively Dr. Takaki's opinion. The profession thinks otherwise. Ernest Hart, Esq., who had a personal experience of these matters, having studied the disease in Japan, absolutely denies that kakké is a dietary disease, and that the dietetic arrangements of Dr. Takaki were alone responsible for the sanitary improvement in the navy; other factors, he says, have also to be considered, without which the new diet would be altogether ineffective.

[1] A second maximum of rainfall occurs in September.

Are you not, when examining the data I have given above, as to the anemography and hygrometry of Japan, struck by the coincidence of kakké with south winds, and with its disappearance as soon as these moist winds cease to blow? Do you think it is rash to conclude from this that, not the food, but the air, carries the disease; that kakké has its origin and soil in the atmospheric moisture? I must say, that, to me, nothing seems more probable. And I am by no means alone of this opinion; as a matter of fact, it is the opinion of a large majority of the profession. My own personal opinion, which I have had occasion to express several times in different medical journals, and which is entirely subversive of the theory of Dr. Takaki, is that the moisture of the air is only an indirect factor in the generation of the disease, the direct cause being the carbonic compounds freed and held down by the heavy atmosphere. Moreover, during the damp season the Japanese are shut up in their dwellings, the air of which is saturated with the fumes of charcoal. That kakké appears only at sea level and never on high altitudes, is in favor of my view of the case.

As to the rice and anæmia etiology, it is a very, very old notion; but its antiquity (it is in fact as old as the Chinese hills) is all that there is in its favor. Dr. Takaki has been ennobled for excogitating this hoary chestnut! If rice has anything to do with kakké it is as a symbol and formula of insufficient alimentation. You might as well incriminate the oatmeal, when beri-beri breaks out in a Scotch crew.

Here is what Dr. Wallace Taylor of the Osaka Medical Mission, and who, by the way believes in an atmospheric origin of kakké, says in his last annual report (1893): "The number of cases of Japanese 'kakké,' or beri-beri seen, have been few for a number of years past. Some years ago we saw every year a large number of these cases, running up from one hundred to two or three hundred during the year. Some professional men are of the opinion that a rice diet predisposes to kakké, and that a diet largely composed of nitrogenous foods, such as wheat, barley, meat, milk, etc., will to a great extent be a preventative against kakké. They point to the great diminutive of kakké in the army, navy, and prisons since a change of diet has been made from rations consisting largely of rice to that containing a large amount of nitrogenous substance. These are striking facts that cannot be controverted, and should receive a full amount of consideration. We found by experience years ago, that persons suffering from kakké did much better on a diet of boiled barley and the small, red, adzuki bean than while living chiefly on rice; yet, nevertheless while kakké has very materially diminished in the army, navy, and prisons coincident with the change of rations, it has also at the same time, in this part of Japan, diminished very greatly among merchants, students, and the Japanese generally, persons who have made no change, or but very little change, in their diet, almost if not quite to as great an extent as among the classes referred to. This evidently shows that other influences than a change of diet have had much to do in lessening the prevalence of kakké.

"Other facts also familiar to physicians and generally accepted among the masses at large go to show that other influences than diet have much to do in determining the prevalence of kakké. As, for example, the almost complete immunity of children under twelve years of age from kakké, the greater prevalence of kakke among men than among women, and the greater liability of women to kakké when *enceinte* and during the puerperium than at any other times, and also its severer character and greater fatality at such times, while the food of these classes remains essentially the same. Thus age, sex, and physical conditions exert a controlling influence on the prevalence of kakké. Other occult influences, which we have not yet learned to discern, may also exert a controlling influence. Other diseases are known to have their periods of quiescence, when comparatively few cases are known, and then after some years begin to become more frequent, and

gradually increase in frequency till they become prevalent, to diminish again after a series of years. The causes that operate to produce such cycles in the history of certain diseases are as yet unknown. Such may, and most probably will, prove to be the case with kakké, in Japan. And when kakké again becomes as prevalent in this country as it was ten and fifteen years ago, it most probably will be found that the present rations for the army, navy, and prisons do not secure so great an immunity from the disease as is at present supposed."

The diminution of the number of kakké patients in Osaka, that is on the west coast of Japan, is evidently not due to Dr. Takaki's method; his dietary arrangements are limited to the navy. The decrease observed by Taylor is not observable on the east coast. But the climatological conditions on the two coasts are also very different. In winter the barometric pressure decreases rapidly from southwest to northeast; in summer it is higher on the sea, east of Japan. On both coasts the intensity of the monsoon currents (that is northwest in winter, and south in summer) is far from being the same on the two coasts. In winter the gradient from west to east and from southwest to northeast is considerable, the winds are strong. In summer the gradient is small, and therefore there exist in many places local currents of air (which would seem to dissipate the materies morbi contained in the air). This happens, for instance, on the shores of the Japanese Sea, that is on the west coast. The regular monsoon climate is developed on the eastern slopes; and up to 36° north latitude, which includes Tokio, we find a double maximum of rain, one in June, one in September, while the second part of July and August is less rainy. Above the 36th degree of latitude on the east coast and on the whole west coast, there is not as much rain as on the east coast south of Tokio.

It seems evident that the climatic variations on the west coast, due to the existence of local currents of air, in some way, by purifying the air, militate against kakké.

On the east coast, especially below Tokio, we have the Japanese black stream influence, which is the cause of the double maximum of rain; it keeps a steady, unvarying climate during the rainy season. The same steadiness characterizes kakké in these regions.

One last consideration. When the disease breaks out in a ship on a long voyage it can hardly be ascribed to insufficiency of nutriment. For, if that was the cause, hardly any ship at all would escape kakké. As it is, kakké only breaks out (mark the coincidence) on ships carrying some substance which itself contains carbonic poisons, fermenting sugar, fermenting wheat, fermenting rice, etc. Do not these facts, which you can easily verify, keep my carbonic theory in countenance?

I have not, in this paper, I hope, swerved too far from my original purpose, which was to show that there is nothing extraordinary in the closing of the kakké ward in the University Hospital of Tokio, in the month of November; and that even if the event was an exceptional one there would be still good reasons, and also good authorities, for not attributing it to victorious science, as represented by Dr. Takaki's anti-rice institutions.

Very respectfully,

ALBERT S. ASHMEAD, M.D.

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Poulticing the Ear.—Dr. Albert H. Buck, writing in the *International Medical Magazine*, says that while heat is one of the best remedies in painful inflammations of the middle ear, and the poultice is one of the best methods of applying heat, as usually put on the poultice has little effect. What should be done, he says, is first to fill the external auditory canal with lukewarm water, the head resting on the unaffected side upon the pillow. Then a large flaxseed poultice is applied over the ear, as hot as it can be borne. The column of water is thus kept warm and acts as a conductor of heat between the poultice and the inflamed surface.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 27, 1893.

	Cases.	Deaths.
Typhus fever	14	11
Typhoid fever	10	7
Scarlet fever	149	19
Cerebro-spinal meningitis	28	29
Measles	180	9
Diphtheria	106	32
Small-pox	12	2
Cholera	0	0
Varciella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

Potassium Chlorate in Leprosy.—Dr. Carreau has treated a case of leprosy with very large doses of potassium chlorate. He gave from 150 to 300 grains of the drug daily for three days, and produced grave symptoms of poisoning. After the disappearance of these symptoms, however, the leprous tubercles were found to have almost entirely disappeared, the skin being left soft and wrinkled.

The Etiology of Whooping-cough.—Dr. Ritter, of Berlin, has been making some researches into this subject. When it was possible to obtain any expectoration at the end of a paroxysm of coughing, the sputum was received into a sterilized vessel and carefully washed with distilled water. Small opaque particles were generally found, and these were removed with due precautions and cultivated on agar-agar. Small colonies appeared within twenty-four hours. Under the microscope these were found to consist of diplococci. The colonies were opalescent and grayish in color, and adhered firmly to the surface of the cultivating medium. These diplococci are different from those described by Fraenkel as present in pneumonia. Although his experiments on animals were not yet completed at the time the report was made to the Berlin Medical Society, yet Dr. Ritter had already obtained results which seemed to point to this micro-organism as the specific agent in the production of pertussis.

Pseudo-strongulus.—In certain diseases of the kidneys or ureters blood is exuded slowly and clots, thus forming a cast of the ureters. These casts are often quite firm, and present a striking resemblance to the parasite which infects the genito-urinary part under the rank and title of the strongulus gigans. Some years ago, at Kiel, a patient passed a number of "worms" of this description, and they formed the text of several very learned lectures and monographs, the latter embodying wood-cuts of the marauding parasite. Later on, however, they were submitted to microscopical sceptics and minute histological examination, when of course the error became apparent and the monographs had to be withdrawn from circulation.—*Medical Times and Hospital Gazette.*

The Berlin Sewage Farms.—At a recent discussion on sewage farms and typhoid fever at the Medical Society of Berlin, Professor Virchow expressed the opinion that the sewage farms of Berlin cannot be regarded as in any way tending to spread typhoid fever, and stated that no single case of it had been traced to the drinking of the effluent water.

A New Treatment of Cholera.—Dr. Fedoroff, of Moscow, publishes in the March number of the *Zeitschrift für Hygiene*, some experiments made by him during last summer in the treatment of cholera, by means of subcutaneous injections of a fluid prepared by adding cholera bacilli to an extract of thymus gland. The results were so far satisfactory as to justify further experiment.

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A CONTRIBUTION TO THE SUBJECT OF MYXŒDEMA,

WITH THE REPORT OF THREE CASES TREATED SUCCESSFULLY BY THYROID EXTRACT.[1]

BY M. ALLEN STARR, M.D., PH.D.,

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THE condition known as myxœdema has been so completely described in the report of the Committee on Myxœdema of the Clinical Society of London, and in the paper of Dr. Kinnicutt, before the Association of American Physicians, that no further discussion of the symptoms is necessary. I desire, however, to present the following three cases to the Society as a contribution to the therapeutics of this disease by the use of thyroid extract. And in connection with these cases I desire to discuss briefly the mental condition present in all of my patients.

CASE I.—Female, aged forty-six, from Newcastle-on-Tyne, England; a teacher by occupation; married; of good family history and always in fair health until the beginning of the present illness. Developed myxœdema in April, 1882, soon after the birth of her fifth child.

The diagnosis was made by Dr. Drummond, of Newcastle, soon after the onset. Her condition has been a sad one ever since, and various forms of treatment had failed to give her any relief. She says that her disease developed gradually. The swelling of the skin began on the abdomen and gradually extended to the face and extremities. As the swelling increased her skin became dry, scaly, and hard, and she often had formication in it. The nails soon became thick, horny, and curved, both upon fingers and toes. Her hair fell out. Her temperature from the first was subnormal, she never felt warm, and was exceedingly sensitive to the cold. The sensitiveness to the cold has been greater upon the right side of the body, on which side for a time her sensation of touch was much impaired, especially in the fingers. Subjective sensations of a prickly character have been felt all over the body. She has suffered much from occipital headaches. There has never been any paralysis, but she says that when at her worst she has staggered somewhat in walking and has not been able to walk any distance without much exhaustion. She states that the knee-jerks were at first exaggerated, they are now normal. From the beginning she had menorrhagia, for the relief of which, all other means failing, she submitted to ovariotomy, without effect upon the course of her disease.

Her mental state has been affected from the outset. She is a very intelligent and observant woman and estimates her mental condition with considerable accuracy. She noticed a very marked slowness in all her mental processes, but denies any abnormal persistence in one train of thought. She feels that there is an uncertainty in her judgment, and that she cannot think as clearly as she formerly did. She admits that her temper has become very irritable, and that she gives way to this irritation more easily than she ought to do. She has slept badly during her entire illness, though occasionally there have been periods during which she was unduly somnolent, and would sleep in the day time. She denies having any delusions, but has been subject to hallucinations at intervals during her illness, having seen animals and people about her which perplexed her very much. She does not think that she has ever been insane, but admits that she was nearly so, her mind being constantly occupied by the hallucinations and being so confused that no mental process could be clearly performed. Throughout her illness her memory has been treacherous, and it is not very clear with regard to dates at present. She has been timid in coming out of the house and has been unwilling to meet people. It is impossible to feel any thyroid gland in the neck.

The preceding history was obtained from this patient in February, 1892, when she was first seen at my clinic at the College of Physicians and Surgeons and shown to the class. At that time an examination showed the typical appearance of myxœdema; the face, supraclavicular regions and the entire body, including the extremities, being swollen and œdematous, though not pitting upon pressure; the color of the skin being a yellowish white and reminding one of wax; the hands and feet being pigmented so as to present a dirty appearance; the hair being very thin; the nails hard and curved; the skin being scaly, dry, and wholly lacking in perspiration, the surface feeling cold to the touch. Her speech was thick and characteristic, the lips and tongue being much swollen. Her vision was good, though she said that at one time it was quite defective; her hearing was good, though she said that at times she had been quite deaf. Her smell was poor, but the taste was keen. Her heart-rate was a hundred, and there was no murmur. Her arteries were soft, her respiration was regular and normal though she says she often has dyspnœa upon exertion. Her temperature was 97½° F. in the mouth. Her digestion was good, she has had no difficulty in swallowing, though her tongue and gums have been swollen at times; her teeth were in good condition, she has not suffered from indigestion or from constipation.

When first seen her mental state was decidedly abnormal, she was easily depressed and not at all clear in her statements.

She returned to the clinic on March 10, 1893, having been informed by her physician in Newcastle of the new cure for myxœdema. Her condition at this time was practically the same as in 1892. She was immediately put upon the glycerine extract of thyroid gland prepared for me by Dr. George M. Crary, of this city. Her photograph was taken on March 17th, and is herewith exhibited (Fig 1). Her temperature was found to be 97⅜° F. in the mouth. She was given six drops of the extract three times a day, and instructed to increase the dose one drop daily. She has been seen once or twice a week up to the present time. The improvement began within ten days of the beginning of the treatment, and has been progressive and continuous. This improvement has affected both body and mind, and in every respect the change for the better has been marvellous. The œdema has practically vanished, as may be seen from the accompanying photograph taken May 12th (Fig. 2). Her mental condition has improved to even a greater extent than her bodily state. She is bright and cheerful, quick in her thought and in her replies to questions, accurate in her statements, so that it is now possible to review her history and to fill out many points that were previously uncertain. Her recollection of her past sickness is more vivid now than it was before the treatment was begun. She is able to walk several miles a day, when formerly it ex-

[1] Read at the Association of American Physicians in Washington, May 30, 1893.

hausted her to walk eight hundred feet. She is free from pain, and sleeps well. The temperature has steadily risen under the treatment, and is now constantly normal. She has lost the feeling of cold which formerly annoyed her. She says that she is passing more water. Quantitative estimates of the urea have not been possible in this case, but the urine has at no time contained albumin or casts.

Fig. 1.

The dose of extract was increased until she was taking ten drops three times a day, at which point it caused a feeling of exhaustion. The pulse was found to be over a hundred, and the temperature, 99½° F. The dose was therefore reduced to eight drops, and has been maintained between eight to nine drops three times a day for the

Fig. 2.

past month. This is the equivalent of half of a gland daily.

Case II.—Female, aged twenty-two, single. Father, exceedingly nervous; mother, an invalid all her life, died of phthisis in 1890. No one in the family was known to have any disease resembling myxœdema; but the entire family on both sides is exceedingly neurotic.

The patient was never very strong, having had glandular swellings, chronic otitis media, headaches, and attacks of anæmia ever since she was a child. She had measles at the age of fifteen, and has never been well since. The onset of the disease has been so gradual that it is impossible to say when the present symptoms first developed, but it is certain that in 1889 her appearance was noticed to be peculiar, the face being swollen and waxy in its pallor.

From 1889 until August, 1891, she was under treatment by various physicians for anæmia and chlorosis. In August, 1891, she received a severe mental shock, being with a relative who developed acute mania, and immediately after this she began to show mental symptoms which had not been present before. These mental symptoms consisted of hallucinations of sight, vivid at night, and causing her much alarm: she saw visions of angels, devils, and animals about her, and these kept her awake and gave her distress. At the same time delusions developed that she was a great sinner, that she had committed crimes, that she should starve. These delusions, usually of a melancholy type, persisted with greater or less intensity until the treatment was begun. The melancholy was so intense as to prevent her from taking any interest in things about her, and she would spend hours crying. She could not be diverted even when her mental distress was over. One of the ideas which distressed her chiefly she has never been willing to state to any one; it was probably of a religious type. She was at times so excited that violence and suicide were feared by her friends.

She was first seen by me on February 19, 1892. I found a rather large, well-formed girl, with dull facial expression, waxy complexion, œdematous appearance of the face, including the eyes, cheeks, and lips, which were markedly swollen, the facial lines being effaced and the nasolabial fold being much elevated. The lips were everted and the mucous membrane of the mouth and tongue was pale, swollen, and œdematous. The teeth, both of the upper and lower jaws were much deformed, presenting a typical Hutchinsonian appearance and being irregularly set in the jaw. The summit of each tooth was not more than half the size of the remainder of the tooth, was devoid of enamel, and discolored. The hair upon the head was thin and has frequently fallen out; it is dry and brittle. The eyebrows and lashes were normal; conjunctivæ red and swollen; the skin of the face and body was rough, dry, and scaly. The skin of the hands halfway up the arms was dry, scaly, dark brown, cracked, much wrinkled, and rough. The skin of the feet presented the same appearance as that of the hands, but the legs were not pigmented; there was no perspiration; the nails were slightly ridged longitudinally, and thick, but are said to grow naturally. The surface of the body feels cold, and she has a sensation of cold most of the time; when coming in out of the cold she feels a burning and numbness all over the body, especially in the extremities. The swollen tissues of the face and abdomen do not pit on pressure. Pulse was small, soft, and weak, about sixty-five; heart-sounds, normal; temperature, 98° F. Digestion is poor, there being little appetite and considerable constipation. She denies headache, but complains of vertigo and insomnia. Her menses are profuse, lasting six days, and occur regularly. No thyroid could be felt.

Her mental condition was found to be abnormal. She talked slowly and monotonously, the speech being very thick. Her memory was weak and her answers to questions were not reliable. She was very emotional, cried and laughed frequently, and had to leave the room in a paroxysm of crying several times during my first visit. Talking excited her, and she complained of feeling much confused on any mental exertion. It was impossible to keep her attention fixed upon music or sewing or reading for any length of time, and she sits listless and brooding most of the day. At night she has hallucinations of sight

and hearing, believes that she has visions of angels and that people are talking to her constantly. She has the delusion that people around her can influence her by their thoughts, that she can read the minds of others, and that they can read her mind, and that she has been hypnotized without her consent. These delusions cause her great distress and much excitement at night. Motion is slow, reflexes normal, pupils act normally, optic disks pale but clear. The anæmia is very intense, blood corpuscles 3,600,000 to the c.m.

From February, 1892, until January, 1893, this girl's condition was practically stationary, the symptoms varying slightly from time to time in their intensity, and the œdema changing somewhat from week to week. Warm baths and massage with oil, nitro-glycerine $\frac{1}{100}$ of a grain three times a day, and sulphonal at night seemed to have a better effect than any other form of treatment; ergot being evidently deleterious, and iron and arsenic producing no effect. In view of the appearance of the teeth a course of mercury and iodide of potassium was carried out for two months without apparent benefit, and the physiological effects of iodide appeared when the dose reached forty grains a day. Several attempts at such treatment have been made, but have had to be given up on account of her susceptibility to the iodide of potassium.

On January 6, 1893, this girl was put on thyroid extract, the dose being five drops three times a day, increased gradually up to twenty drops three times a day. The improvement began three weeks after the beginning of treatment. At present, May 1st, her condition is markedly changed; the œdema has disappeared from the face and body and extremities, the tongue and lips alone being now affected. The skin is soft and no longer scaly and dry, she has some color, is well nourished, digestion good. Mentally she is apparently well: she has no hallucinations or delusions, she goes about in society and to church, is able to practise, to sew, and to read, she still has a slight feeling of depression and cries a little. She is not quite natural in her manner and is disinclined to talk about her mental symptoms, but in contrast to her previous state she is very much improved and is almost well. Her temperature, which had always been subnormal, is still about 98° F. in the morning, but is now 99° at night: her pulse is 72, quite full and strong. During the use of the extract the amount of urine passed daily has increased markedly, and is now about two quarts. She has been out of the city, and no exact examination of the urine has been possible. It never contained albumin. The insomnia is the only symptom which persists, but mild doses of sulphonal or chloral are sufficient to relieve this. She walks three miles a day and may be said to be fairly well. She is still taking thirty drops daily of the thyroid extract, which is equivalent to half a gland.

Case III.—Female, aged forty-six, married, has been under my observation since April, 1887, suffering from a variety of nervous symptoms due to the condition of myxœdema which has been present ever since I first saw her, and which has undoubtedly been present since 1880, as even at that time she was suffering from many symptoms indicative of the condition of myxœdema.

The onset of the disease in this lady was very slow and the symptoms have been very numerous and variable, the only constant symptoms being the condition of general swelling of the entire body, face, and extremities, extreme pallor, with anæmia, deafness, great nervous excitability, with occasional periods of depression without apparent external cause, occipital pain, albuminuria, and the peculiar scaly, dry condition of the skin, with falling off of the hair.

When I saw her first it was on account of the sudden development of right-sided facial paralysis, which has remained in part up to the present time in spite of the most careful electrical treatment begun immediately after its onset, and continued for several months. The paralyzed muscles of the face have gradually contractured so that very little asymmetry is now visible, unless she smiles or attempts voluntary movement upon the right side of the face. The deafness has varied slightly from time to time, though it has always been so extreme as to require the use of an audiphone. Her menses ceased six years ago, but at the time when they should occur every month she is nervous, depressed, and appears to suffer from a variety of symptoms of an hysterical character. She has had six children, three born since 1880.

The diagnosis of myxœdema in this case was not made by me until 1892, the patient having been treated at intervals during five years for chronic nephritis, for anæmia, and for periodical attacks of melancholia and general nervous symptoms, the basis of which was supposed to be the chronic nephritis. She was seen during this time by three eminent consultants in New York, who concurred in this diagnosis. Nitro-glycerine was the only remedy which ever appeared to give her relief when suffering greatly, though many other things were tried. At present, now that the condition has nearly subsided under the thyroid extract, it seems clear to me that the symptoms were those of myxœdema from the outset. Yet the mistake in this patient was not without excuse, for she is a very large and very fleshy woman, and therefore the œdema, which has never been in her case extreme, was thought to be merely a condition of obesity, and the waxy appearance was thought to be due to the nephritis.

Yet as the case is now understood, both the physical and mental symptoms, and the appearance, manner, and especially the speech of the patient, formerly referred to her almost total deafness, can now be referred to the condition of myxœdema, formerly overlooked. In November, 1892, she came under my observation after an interval of over a year, for she was suffering from a condition of great physical exhaustion, severe headaches, insomnia, attacks of dyspnœa, and mental depression. There was a diminution in the amount of urine passed, and the urine was loaded with albumin, contained very little urea, and many granular and hyaline casts. The same condition of the urine had been noted in my history as having been present in June, 1887, for a short time. On examination of the patient in November, 1892, I recognized the appearance and speech of myxœdema, and it seemed to me quite clear that the kidney condition was merely one manifestation of the disease which I had formerly overlooked. With this conviction I began the treatment by thyroid extract as soon as my friend Dr. George W. Crary, who had direct charge of the patient at the time, could prepare the extract; this was the first case in which I had used it.

The extract was prepared by Dr. Crary by obtaining the glands of the sheep at the slaughter-house, which he did with much difficulty, as it was found that the butchers in killing the sheep cut the throat of the animal at such a place as to divide these glands in half, and as in many sheep they are very small, weighing only ten grains, it was necessary to make a careful dissection of the two portions of the severed neck in order to find them. The butchers were unaware of their existence, and when requested to furnish the gland uniformly produced the thymus gland, which they term the throat sweetbread. Dr. Crary succeeded in finding the real thyroid, however, and a microscopic examination was made by Dr. T. Mitchell Prudden of portions of the glands obtained, in order that we might be positive that we were dealing with the right gland. As Dr. Crary has supplied me with the extract in all the cases treated, I here produce his statement of the method in which it is prepared.

He dissects the glands, together with the fascia, from the trachea, and washes them thoroughly in a saturated solution of boracic acid; he then dissects off the fat, obtaining the gland in its capsule with the vessels attached, and then washes this in a saturated solution of boracic acid. From this solution the glands are taken, put into a sterilized towel, and with sterilized instruments the glandular tissue is carefully cut away from the fat, from the fascia, and from the vessels, so that only glandular tissue remains. This is then weighed. This glandular tissue from

each thyroid weighs from ten grains up to one-half ounce. Numerous glands of very large size which have been considered diseased have been found, but these are uniformly rejected; the glandular mass is then chopped very fine and mixed with glycerine and allowed to stand four days. The glycerine is the German doubly distilled glycerine, which is sterilized by heat for two days before being used. The extract thus obtained is very carefully filtered through sterilized cotton under pressure, and presents the appearance of a red sirup. It has been kept for a month without presenting any evidences of the development of micro-organisms.

The amount of thyroid gland in a drachm of this extract is twenty-four grains, which is equivalent to an ordinary-sized gland. This extract has been given in drop doses to patients. The usual doses being thirty drops daily in divided doses, equal to half a gland.

The patient whose case we are now considering was given at the onset ten drops three times a day; within twenty-four hours the condition had changed and the reaction was so intense as to give rise to much alarm; the temperature had risen to 103° F., the pulse to 160; dyspnœa was extreme and the mental distress very alarming. By the use of digitalis, atropia, whiskey, and strychnine these symptoms were combated, and at the end of twenty-four hours had subsided, not, however, without causing us great anxiety. It was evident that the patient had suffered from an acute poisoning, and that even thirty drops of the thyroid extract had produced very marked effects. When the thyroid extract was resumed after an interval of a week it was begun in five-drop doses twice a day, and this dose was gradually increased to ten drops three times a day, which is the largest dose she can take without manifest discomfort. From the time the dose reached eight drops three times a day the improvement began to be noticeable. At present, after four months' treatment, her appearance is wholly different from that to which I have been accustomed for the past six years. She no longer has the appearance of undue obesity, the natural lines of her face being now so perfect that we begin to realize how much her preceding appearance was unnatural, and the double chin, which was large, having disappeared. The skin, which formerly was dry, rough, and scaly, is now soft and smooth, and she says that she is beginning to perspire naturally, a thing she has not done for ten years. There is a perceptible new growth of hair upon the head and in the arm-pits. The supraclavicular swellings, which were very noticeable, have gone away entirely; her speech is very different in character, her facial expression has markedly changed for the better, her appetite and digestion are good. The urine has increased in amount, and now contains much more urea and very little albumin and only occasional casts. The action of her heart is regular and moderate, and there are no longer attacks of faintness and dyspnœa.

Mentally she is very much changed, the depression has entirely passed away and she is in a state of comfort, interesting herself in her family and acting in a perfectly normal manner.

One feature of these cases which has interested me greatly has been the type of mental disturbance which has been present, and the great relief of the mental symptoms which has been afforded by treatment. Now that these patients have recovered they are able to discuss intelligently the phases of mental disturbance from which they have suffered. It is evident that the mental derangement has not been of the ordinary type seen in insanity. It cannot be classified under the head of melancholia, mania, or confusional insanity, or hallucinatory insanity, or dementia, though it presents symptoms which might at different periods in the course of the disease remind one of any or all of these forms. All three patients had hallucinations of sight, occurring chiefly at night, of disagreeable figures and faces, sometimes animals, sometimes men, sometimes devils. One of them had hallucinations of hearing and would listen for hours to what she considered were communications from the Deity. Two of them had delusions well systematized, but not constant, and all of them had suicidal impulses. The emotional state in all three was from time to time one of great depression and despair, yet in none was there any facial expression of settled melancholia, and in all it was possible to divert them for the time being and produce interest and a smile, a condition very rare in true melancholia. In one of the cases occasional states of excitement almost maniacal in character were observed. In all the cases the general permanent mental state resembled mild dementia. There was a lack of interest in subjects, a tendency to sit listless and unoccupied, a feeling of effort on mental exertion, and actual inability to fix the attention or to conduct a train of thought. Continuous conversation soon wearied them, and the mental weakness was very noticeable in all. In all the cases the will power was deficient, there being a lack of energy so that mental or motor effort was exceedingly disagreeable and all movements were very reluctantly performed. There was defect of sensation in all the cases; continuous use of the eyes producing great weariness; there being marked deafness in two of the cases, which varied from time to time in intensity; taste and smell being slightly impaired in all three cases and sensations of touch being impaired upon one side of the body in two of the cases.

It is thus evident that both the afferent channels of communication from the external world and the efferent paths of impulse to the muscles were in some way blocked by the disease, while the internal processes of mental association and activity were also hampered and deflected from their ordinary course.

We have to deal, then, with a group of mental symptoms in this disease similar in kind but quite different in their course from those characteristic of the ordinary psychoses, and quite as typical in their character of myxœdema as are the physical appearances so well known.

That these mental symptoms must be due to certain physical changes in the brain, probably similar in nature to those visible in the body, must be admitted, especially in view of the relief of the mental symptoms by the treatment with thyroid extract.

Swallowing a Watch.—The freaks of lunatics are sometimes extraordinary, and one of the most remarkable which has been placed on record recently is that which Dr. Vallow has published in the current issue of a French contemporary. A man, aged thirty-seven, was confined in an asylum suffering from hallucinations, and one day, his wife having come to visit him, he was permitted to see her. When the allotted time of the interview, according to the rules of the institution, had come to an end, his wife intimated that she would have to take her departure, whereupon the patient, judging that she wanted to leave him before the time had expired, flew into a violent passion and accused her of deceiving him. To prove, however, the truth of her statements, she drew out her watch and showed him the time, but as soon as the patient saw the watch, he suddenly seized it in his hand, tore the chain from it, and, putting it in his mouth, swallowed it. The medical officer of the asylum was summoned at once, but the patient in no way appeared to have suffered from his curious freak. On examination of the stomach nothing could be felt, and it was at first believed that, after all, the watch might not have been swallowed. However, all due precautions were taken, and on the sixteenth day the watch arrived *per naturalem viam*. It was a silver watch measuring about two inches and a half in diameter, exclusive of the ring, and about half an inch in thickness.—*Medical Press.*

French Congress of Surgery.—The next meeting of the French Congress of Surgery is fixed for the middle of October, 1894. Professor Tillaux has been elected President, and M. Alphonse Guérin, Vice-President. The questions proposed for discussion are: 1, The Etiology and Pathogenesis of Cancer; 2, The Surgery of the Spine.

STERILIZATION OF MILK AT 75° C. (PASTEURIZATION[1]) AND ITS EFFICIENCY IN DESTROYING PATHOGENIC ORGANISMS.[2]

By ROWLAND GODFREY FREEMAN, M.D.,

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Nearly a year ago I read before the Section on General Medicine of the Academy of Medicine, a paper on the pasteurization of milk,[3] and at the same time I introduced a new apparatus for pasteurizing milk in the household by means of which a definite temperature of about 75° C., (167° F.) could be obtained without the use of a thermometer. The apparatus was simple and inexpensive, and was constructed on this principle: By immersing cold milk in boiling water, an equalization of temperature between the milk and the water takes place, giving a resultant temperature which depends on the relative quantity of milk and water used. In this apparatus the milk contained in the nursing bottles and immersed in the zinc receptacles was placed in the hot water. The proportion existing between the amount of material to be heated and the boiling water necessary to heat it was carefully calculated, and the apparatus made of such a size that a resultant temperature of about 75° C. (167° F.) in the milk was obtained.

I wish to speak very briefly of the advantages of pasteurization over sterilization, and afterward to discuss the following subjects: 1. The action of a temperature of about 75° C. (167° F.) as produced in the above pasteurizer on certain pathogenic organisms. 2. The possible modification of the size of the curds in cow's milk subjected to the action of gastric juice. 3. Certain unreliable methods of so called pasteurization of milk.

When antisepsis was introduced into surgery, operators resorted to extreme measures in order to take every precaution against germ invasion, and there resulted a period when many operations were performed in a room filled with carbolic spray. As knowledge of bacteriology and experience increased, such extreme measures were found unnecessary and were abandoned. In a similar manner in the effort to destroy the germs in milk, certain results were known to be accomplished by sterilization of milk at a steam temperature (100° C. = 212° F.), and for a period of seven years that temperature has been used almost exclusively. Investigation and experience have now shown that for ordinary purposes sterilization at 100° C. (212° F.), may be abandoned and replaced by pasteurization, that is by subjecting the milk to a temperature of about 75° C. (167° F.) for fifteen minutes, followed by rapid cooling.

In the practice of what was called sterilization at 100° C. (212° F.), investigators put themselves on the safe side as far as freeing the milk from deleterious micro-organisms is concerned (although absolute sterilization was not even then obtained), but they apparently went farther than was necessary, and, in so doing, rendered the milk less digestible than it is in the raw state. Physicians who used sterilized milk as a regular food found that often infants so fed did not thrive. This clinical experience is accounted for by chemists who tell us of many modifications produced in milk by a temperature of 100° C. (212° F.). The starch liquefying ferment is destroyed. Caseine is rendered less coagulable by rennet, and is acted on slowly and imperfectly by pepsin and pancreatin. Milk sugar is destroyed. These changes begin to be marked when a temperature at 80° C. (176° F.) is reached, and become more marked as the temperature becomes higher. Pasteurization at a temperature of 75° C. (167° F.) furnishes a food which is practically sterile during the ensuing twenty-four or forty-eight hours; a food on which infants do seem to thrive, and which has undergone practically no modification from heat. Milk prepared in this way is not intended for keeping several days, but should be prepared daily.

Pathogenic organisms may be present in milk from, 1, contamination from the cow before the milk leaves the udder; 2, contamination from the cow after the milk leaves the udder; 3, contamination from various other sources. Contamination of milk before it leaves the udder, by the bacillus of tuberculosis, for example, may result from disease of the udder, or apparently from a local disease of some other organ[4] or from a general disease. The danger of contamination of milk from the cow during milking is not to be overlooked. A case of this sort is reported by Gaffky,[5] in which three cases of illness were traced to one specimen of milk from a cow suffering from hemorrhagic enteritis. The milk, as it came from the udder, was found to contain no germs. Under contaminating material from other sources must be classed those pathogenic organisms which may enter the milk from dust, or from persons handling the milk, or from the water which may be added to the milk. In this way, for example, typhoid fever, diphtheria, cholera, etc., may be transmitted. There is, therefore, a possibility of the invasion of any specimen of milk with any one of a considerable number of pathogenic organisms from cattle and from man.

E. Hart[6] has reported 50 typhoid epidemics, 14 of scarlet fever, and 7 of diphtheria, which occurred in England up to 1881 and which he considered traceable to milk. In the accompanying table is a list of certain bacteria which may occur in milk, and their thermal death-point as determined by various observers.

Table of the Thermal Death-point, in a Moist Medium, of Certain Pathogenic Bacteria.

Species.	Exposures.	Observer.
Spirillum choleræ Asiaticæ.	52° C. for four minutes	Sternberg.[4]
	58° C. for a few seconds	Van Geuns.[5]
Streptococcus pyogenes	52° C.–54° C. for ten minutes	Sternberg.
Bacillus typhosis	56° C. for ten minutes	Sternberg. Buchner. Zanowskey.
	60° C. for a few seconds	Van Geuns.
Bacillus diphtheriæ	58° C. for ten minutes	Welch and Abbott.
	60° C. for thirty minutes	Löffler.
Staphylococcus pyogenes aureus.	56°C.–58° C. for ten minutes	Sternberg.
Bacillus coli communi	60° C. for ten minutes	Weisser.
Pneumococcus	56° C.	Sternberg.
	55° C.–60° C. for a few seconds.	Van Geuns.
Bacillus tuberculosis	80° C. for one minute	Forster.[6]
	75° C. for ten minutes	Versin.[7]
	70° C. for fifteen minutes	Grancher and Ledoux-Libard.[8]
	68° C. for thirty minutes	Ritter.[9]
	60° C. for twenty minutes	Bonhoff.[10]

It may be noted that in the experience of these observers a temperature of 60° C. (140° F.) for ten minutes is sufficient to destroy any of these micro-organisms, with the single exception of the bacillus tuberculosis.

In the case of the bacillus tuberculosis, a temperature of 60° C. for twenty minutes has been found by Bonhoff to be fatal. Previous observers have placed the thermal death-point of this bacillus somewhat higher at 68° C. (154½° F.) for thirty minutes, 70° C. (158° F.) for fifteen minutes, 75° C. (167° F.) for ten minutes, 80° C. (176° F.) for one minute.

While it would seem probable from the scattering observations brought together in this table, that the pasteurization of milk at 75° C. (167° F.) would render harmless all of the bacteria above mentioned, yet it has seemed to me worth while to go over the ground anew and in one series and under uniform conditions definitely

[1] Sterilization at 75° C., followed by rapid cooling, is often and conveniently called pasteurization.

[2] Read before the Section on Pediatrics of the Academy of Medicine, New York, May 11, 1893.

[3] MEDICAL RECORD, July 2, 1892.

[1] Wurzburg Therapeutisch Monatsschrift, January, 1891, p. 20.

[2] Deut. Med. Wochenschrift, xviii., 14. 1892.

[3] Trans. Internat. Med. Congress, 7th Session, London, 1881, vol. iv., p. 491.

[4] Manual of Bacteriology.

[5] Archiv f. Hygiene, Bd. ix.

[6] Hygienische Rundschau, October 15, 1892

[7] Annales de l'Inst. Pasteur, 1888, t. i., No. 2.

[8] Arch. de Med. Exp. et d'Anat. Path.

[9] Zeitschrift f. Hygiene, Bd. viii.

[10] Hygienische Rundschau, xiii., p. 81.

establish the point. I have experimented with the following bacteria: Spirillum choleræ Asiaticæ, Streptococcus pyogenes, Bacillus typhosis, Bacillus diphtheriæ, Staphylococcus pyogenes aureus, Bacillus coli communi.

With each of these bacteria, I have made four experiments, two with specimens of raw milk, and two with milk that had been previously sterilized. The bacteria were introduced into the milk from an active culture, and from the milk with the bacteria added, plates were made before and after pasteurization. For the specimens of raw milk, gelatine plates were used, while for the milk that had been previously sterilized agar plates were used. The accompanying table shows the result of these experiments. In the case of each of the bacteria the result was similar. All the specimens before pasteurization showed a growth, while after pasteurization they were sterile. As the purposes I had in view did not require exact quantitative results, exact counts of the number of colonies growing in the original milk were not in all cases made.

Table showing the Result of Pasteurization at about 75° C. (167° F.) on Certain Bacteria in Raw and Sterilized Milk.

Species.	Experiments.	Number of bacteria in milk before Pasteurization.	Days of exposure of Pasteurized milk.		
			1st.	2d.	3d.
Spirillum cholera Asiaticæ	Raw milk, 1.	9,912.	0	0	..
	Raw milk, 2.	16,642.	0	0	..
	Sterilized milk, 1.	Innumerable.	0	0	..
	Sterilized milk, 2.	Innumerable.	0	0	..
Bacillus typhosis	Raw milk, 1.	610.	0	0	0
	Raw milk, 2.	16,738.	0	0	0
	Sterilized milk, 1.	Very large number of colonies, not counted.	0	0	0
	Sterilized milk, 2.	Very large number of colonies, not counted.	0	0	0
Bacillus diphtheriæ	Raw milk, 1.	915.	0	0	0
	Raw milk, 2.	17,385.	0	0	..
	Sterilized milk, 1.	Considerable number of colonies, not counted.	0	0	0
	Sterilized milk, 2.	Considerable number of colonies, not counted.	0	0	0
Staphylococcus pyogenes aureus.	Raw milk, 1.	3,599.	0	0	0
	Raw milk, 2.	Innumerable.	0	0	0
	Sterilized milk, 1.	Innumerable.	0	0	0
	Sterilized milk, 2.	Innumerable.	0	0	0
Coli communi	Raw milk, 1.	Fluidified.	0	0	0
	Raw milk, 2.	Innumerable.	0	0	0
	Sterilized milk, 1.	Innumerable.	0	0	0
	Sterilized milk, 2.	Innumerable.	0	0	0
Streptococcus pyogenes	Raw milk, 1.	720.	0	0	0
	Raw milk, 2.	23,942.	0	0	0
	Sterilized milk, 1.	Considerable number of colonies, not counted.	0	0	0
	Sterilized milk, 2.	Very large number of colonies, not counted.	0	0	0

A question of much practical interest in the preparation of milk for infant feeding is the modification of the tendency of cow's milk to form large curds. It has been held that milk brought to a pasteurizing temperature forms smaller curds than raw milk. Dr. Rotch,[1] of Boston, has compared the curds of raw and sterilized milk when treated with acetic acid, and finds that sterilization exerts no influence on the size of the curds. I have repeated his experiments on raw, on pasteurized, and on sterilized milk, and find no noteworthy difference in the curds. On treating raw, pasteurized, and sterilized milk with a glycerine extract of pig's stomach in test-tubes, a difference was observed; the raw milk appearing to form a much larger and denser curd than the pasteurized and sterilized milk. I then prepared an artificial gastric juice (consisting of glycerine extract of pig's stomach, 1½ c.c., acid. hydrochloric., ¾ c.c., water, 250 c.c.) and treated several specimens of raw, pasteurized, and sterilized milk with it in water bath at 40° C. In this case, as with the acetic acid, no marked difference in the coagula was observed.

In conclusion I wish to mention the Arnold steam sterilizer as a means of pasteurizing milk, since it has recently been stated, in an excellent text-book on diseases of children, that milk may be pasteurized by exposure in the Arnold steam sterilizer for fifteen minutes.

Eighteen months ago I made a long series of experiments with the Arnold steam sterilizer as the apparatus then in use, endeavoring to adapt it to the purpose of pasteurization. I finally gave it up, because without the use of a thermometer it seemed impossible to obtain a definite temperature below 100° C. (212° F.). In using an ordinary Bunsen burner under a small-sized sterilizer, I found that when a temperature of 70° C. was reached in the bottom of the centre bottle the temperature in all the bottles was rising from fifteen to twenty degrees in five minutes. Assuming that exactly the same temperature was always reached in the same time, the rise of temperature was so rapid when the desired temperature was reached, that an accuracy unobtainable in the household would be necessary in extinguishing the light at the proper time.

But the same temperature is not always reached in the same time. The rapidity of the rise of temperature in the sterilizer depends on the size and position of the flame. It depends on the pressure of the gas; on whether the tip has been removed from the gas burner to which the rubber pipe feeding the Bunsen burner has been attached; on the distance of the flame from the bottom of the sterilizer: and whether or not it is stood under the middle of the sterilizer; or, if used on a stove, on the sort of fire heating it. The result obtained in one experiment by a fifteen-minute exposure of 8-ounce bottles in a small sterilizer, heated by an ordinary Bunsen burner attached by a rubber pipe to a gas burner from which the tip had not been removed, was a temperature of 40° C. in the bottom of the centre bottle and 31° C. in the bottom of the side bottle. In other experiments when the gas-tip was removed temperatures varying from 55° C. to 70° C. were obtained. A temperature of 37° C., as you know, is that in general most favorable for bacterial growth, while a temperature below 55° C. is not a pasteurizing temperature. Although such a method as that recommended might be used in an institution where all the factors remained constant, and where experiments were first made and very accurate timing could be depended on, pasteurizing by this method in the household is apt to be worse than useless, and to give a false idea of security to those adopting it. The minimum temperature produced by any method of pasteurization should be one that is fatal to most bacteria. A pasteurizing temperature, I believe, should be neither less than 70° C. (167° F.), nor more than 80° C. (176° F.).

The important matter of rapid cooling to about 20° C. after pasteurization, is best solved by a water bath. In my paper last year I noted that cooling in the refrigerator was unsatisfactory, since about two hours were required to reach a temperature of 20° C., and until 20° C. (68° F.) was reached the milk was at a temperature very favorable for bacterial growth. In a water bath the temperature of the milk may be reduced to 20° C., or the temperature of the bath, in twenty minutes. This may be done in using the pasteurizer by standing the pail in a sink, then elevating the receptacle a little and allowing a stream of water from a faucet or rubber pipe to enter the pail, the displaced warm water escaping over the top of the pail. In twenty minutes the milk will have reached the temperature of the water used and the bottles may then be put in an ice-box.

One thing which pasteurization does to which, as far as I know, attention has not been called, is that it stops artificial digestion. The gastric ferment is, according to Halliburton,[1] destroyed by a temperature of 70° C., while the pancreatic digestion is destroyed by 60° C.

It has been customary after peptonizing milk to bring it to a boiling temperature in order to limit the action of the ferment. This may be as efficiently done by pasteurization at 75° C., the milk thus escaping exposure to a boiling temperature.

[1] Keating's Encyclopædia of Diseases of Children, i., 27.

[1] W. D. Halliburton: A Text-book of Chemical Physiology and Pathology, p. 659.

Summary.—1. Pasteurization of milk at about 75° C. affords a safeguard against the deleterious effects of any bacteria which it may contain, without interfering with its nutritive qualities.

2. Pasteurization at about 75° C. (167° F.) destroys efficiently the germs of cholera, typhoid fever, diphtheria, and tuberculosis as well as the Streptococcus pyogenes, the Staphylococcus pyogenes aureus, and the Bacillus coli communi.

3. Pasteurization at about 75° C. does not modify the size of the curds formed when milk is subjected to the action of gastric juice.

4. Milk after pasteurization is best cooled in a water-bath.

5. Pasteurization at about 75° C. may be used after peptonizing to stop the action of the ferment.

To Professor T. Mitchell Prudden, under whose supervision the bacteriological portion of this work was done, I am particularly indebted.

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A SYNOPSIS OF THE PHYSICS OF THE FORCEPS AS A TRACTOR — A NUMERICAL RATIO OF THE FORCES — A NEW AXIS-TRACTION FORCEPS.

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Without dilating, at present, on the peculiar merits of the work of Stein, Van De Laar, Osiander, Hermann, Hubert, Chassagny, and Tarnier, on the forceps, I shall enter into the subject as understood by Hubert; and then endeavor to put the whole on a simple arithmetical basis. Having demonstrated the possibilities and defects of the ordinary forceps, I shall describe a new axis-traction forceps, which is simple, clean, and effective.

The fact that there have been invented nearly two hundred models of the forceps, and that new ones are constantly being added to the number, goes to prove that a satisfactory model has not as yet appeared.

From a study of many instruments, I feel convinced that the forceps I shall describe cannot fail to give satisfaction.

When the head of the fœtus has descended into the pelvic cavity, the tractions can be so directed that the power may be directly opposed to the resistance, and this is all that can be required of any instrument; but when the superior strait is not yet passed, the forceps no longer fulfils this condition, and it causes useless pressure, as much to be regretted for the mother as for the child. The necessity of fulfilling this condition of opposing the power directly to the resistance, begot the idea of axis-traction.

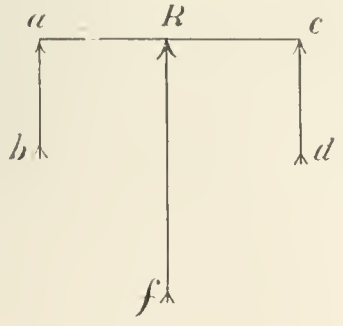


Fig. 1.

When a body passes through a canal, it meets with resistances more or less active, according as the relative dimensions of the container and its contents are more or less exact. These resistances combine or decompose, so as to be represented by a resultant or a single resistance, whose direction is that of the axis of the canal.

It is known, in fact, that if two equal and vertical forces *ba, dc* (Fig. 1), are opposed to the two extremities of the body *ac*, they can be replaced by a single, vertical force *fR*, equal to their sum, and passing through the centre *R* of the body *ac*.

The resistances *io, eo* (Fig. 2), opposed by the osseous and fleshy walls *ab, cd*, of the pelvis are, in reality, oblique, upward, and inward; but as such they decompose into horizontal, *if, ef*, and into vertical *im, en*; and these two latter have a resultant *fR*, equal to their sum and vertical like them.

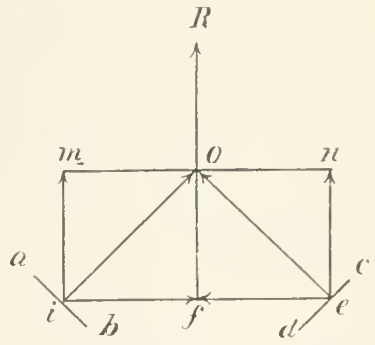


Fig. 2.

The horizontal resistances *if, ef*, tend to effect the reduction of the cranium; the vertical resistances *im, en*, represented by *fR*, oppose its descent.

If the tractions are exerted in the axis of the canal, they are completely useful.

In fact, the force *po* (Fig. 3), directly opposed to the resistance *fR*, will be completely employed in overcoming it; it will be entirely extractive and useful. Passing through the centre *f* of the head *ur*, it will not impress any movement of rotation; and being parallel to the walls *ab, cd* of the canal, it will have to surmount only the resistance of friction.

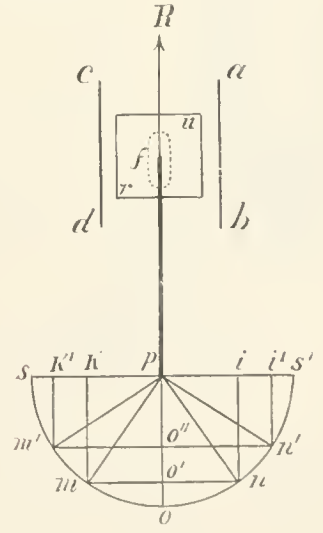


Fig. 3.

If the tractions are made perpendicularly to the axis of the canal, they are entirely lost in injurious pressure.

Let the force *ps=po* (Fig. 3) be applied perpendicularly to the extremity *p* of the forceps, *fp*, the movable body *ur* will soon be found arrested by the wall *cd* of the canal; *r* will become a fulcrum, and *ps* will act on *fp* as on a lever; hence will result a tendency to rotate with exaggerated pressure in *r* and in *u*. The force *ps* is thus entirely lost in pressure.

These pressures are represented by *ps* × *fp*. They are, therefore, all the more violent and injurious, as the forceps *fp* is longer or seized further from the vulva. It is evident that *ps' = ps* would produce exactly the same effect as *ps*, but in the opposite direction.

If the tractions are directed obliquely, they decompose

into extractive or useful efforts, and into compressive or injurious efforts.

In this hypothesis, the useful effect is as much less, and the injurious effect, on the contrary, as much more, considerable, as the direction of the force passes further from the axis of the pelvis, and, consequently, as the forceps is seized further from the vulva. Let the forces *pm*, *pm'* be equal; they decompose respectively into *po'*, *pk*, and into *po''*, *pk'*. *po'*, *po''* are extractive forces; *pk*, *pk'* are compressive forces. Now, *po'* > *po''*, whereas, on the contrary, *pk'* > *pk*. The useful effort is, therefore, less, and the injurious effort greater, for *pm'* than for *pm*. For *pm* and for *pm'*, the injurious effects are represented by *pk* × *fp*, and by *pk'* × *fp*, respectively. *pn* and *pn'* = *pm*, *pm'*, would produce the same effect as *pm*, *pm'*, but in the opposite direction, and would, moreover, induce slipping of the blades from before backward.

The above considerations, always applicable to a straight canal, are equally so when the fœtal head has plunged into the pelvic cavity; but it is different when the superior strait is not yet passed. Here the perineum and coccyx are absolutely opposed to the axis of the forceps, being confounded with that of the superior strait.

Under these circumstances, if the tractions are made perpendicularly to the axis of the superior strait, they are entirely lost in pressure, all the more injurious as the forceps is seized farther from the vulva.

The conditions here are exactly similar to those illustrated by Fig. 3.

If the force is directed so as to pass through the centre of the cranium, it produces effects all the more advantageous as its direction is less distant from that of the axis of the superior strait.

Let the two equal forces *pm*, *pm'* (Fig. 4) be applied,

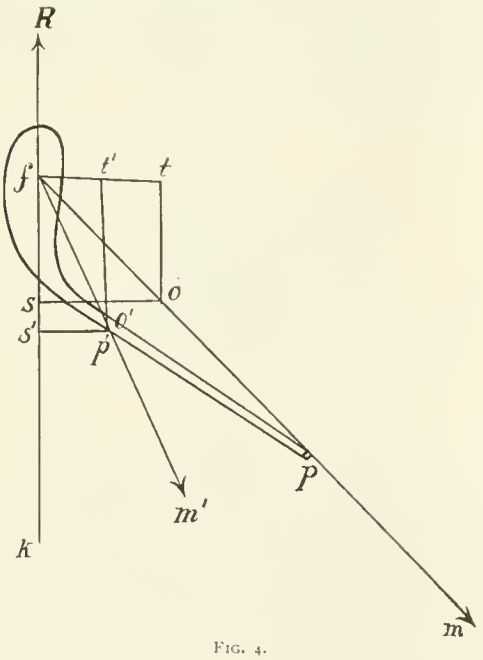


Fig. 4.

one at *p* and the other at *p'*, and passing both through the centre *f* of the head of the fœtus. *pm* = *fo* = *fs* + *ft*; *p'm'* = *fo'* = *fs'* + *ft'*. Now, *fs'* > *fs* and, on the contrary, *ft'* < *ft*. Therefore, the useful effect is greater, and the injurious effect less, for *p'm'* than for *pm*. The forceps should, therefore, be seized as near the vulva as possible.

If the instrument is seized close to the vulva, it is impossible to give a better direction to the force than to make it pass through the centre of the cranium; that is, to draw along the line fpm (Fig. 5).

To prove it, let us first see the effects of *pm*. *pm* = *fo'* = *fs'* + *ft'*. *fs'* represents the useful effort, and *ft'* the injurious effort. Let us then take *pg* = *pm* and parallel to the axis *Rfk* of the superior strait. *pg* = *pr* + *pr'* and *pr* = *fo* = *fs* + *ft*: *pg* = *fs* + *ft* + *pr'*. *fs* is a useful force, but what do the two forces *ft* + *pr'* produce? These two forces are equal, because the hypothenuses *gr'* = *pr* and *fo* being equal, the two triangles together *gpr'*, *otf* give us *pr'* = *ft*.

These two equal forces *pr'*, *ft* directed contrariwise, but not directly opposed, tend to produce rotation; and *fk* being the common perpendicular drawn on their direction, we find that the static momenta are: for *pr'*, *pr'* × ½ *fk*; and for *ft*, *ft* × ½ *fk*.

By relation to the point *f*, the force *pg* produces a useful effect *fs*, and an injurious effect *ft* × ½ *fk*. Whence it is seen that *pg* excels *pm* by the useful effect *fs* > *fs'*; but that it produces, at the same time, an injurious effect much greater, since *ft*, and with greater reason, *ft* × ½ *fk* > *ft'*.

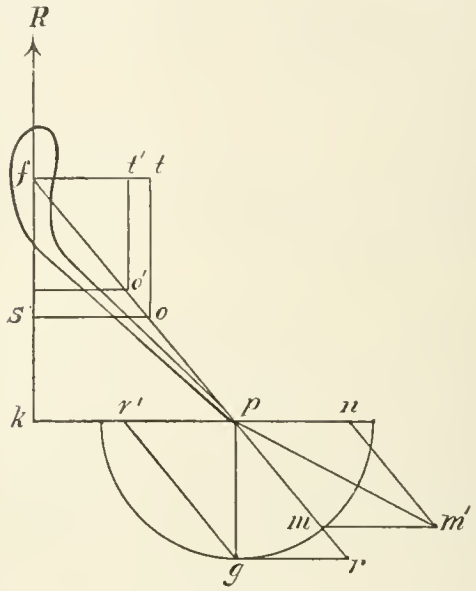


Fig. 5.

As the direction *pm* is preferable to *pg*, so is it also preferable to *pm'*. *pm'* = *pm* + *pn*, and *pm* = *fo'* = *fs'* + *ft'*; therefore, *pm'* = *fs'* + *ft'* + *pn*. *pm'* produces then in *f* only the effect produced by *pm*, but besides it produces by *pn* an effect which can only injure; because this force *pn* is perpendicular to the direction of the resistance *Rfk*.

Now, the two parallel forces *ft'*, *pn*, acting in the same direction, have a resultant—a force equal to their sum and parallel to them—which would pass between the points *f* and *p*, and tend to make the blades slip from before backward—just the same as if the handle were prematurely brought forward.

It is consequently evident that it is impossible, with the ordinary forceps, to apply a single force in a better direction than from the centre of the cranium to a point as near as possible to the vulva.

The Numerical Ratio of the Compressive to the Extractive Effect in Any Forceps.—Having found the best possible direction to give to the traction in an ordinary forceps, *i.e.*, along a line from the middle of the axis of the blades clasping the head, to a point in the instrument close to the vulva; the next question that arises is, what is the numerical ratio of the compressive and injurious, to the extractive and useful, effect of traction applied close to the vulva in any given forceps? In order to render this, the most important and practical part of the subject, as simple and clear as possible, let us take for illustration the well known ordinary Simpson forceps, of which the axis of the blades is 13 ctm. (5 in.) long, that of the shanks 9 ctm. (3½ in.) long, and of which these two axes meet at an angle of 153 degrees.

If these two axes are assumed to form the two sides of a triangle, of which the centre of gravity has been mathematically determined, the direction of the force applied to the end of the shanks would be along a line approxi-

mately from the middle of the axis of the blades *f* (Fig. 6) to the end of the shanks *p*.

With respect to the axis of the blades *ab*, and that of the superior strait *Rk*, this direction of the force *fp* is downward and forward. These two directions when extreme *fs*, *ft*, form a right angle *sft*, and are therefore separated ninety degrees.

The farther the line of traction *fp* lies from the forward direction *ft*, the greater the downward and extractive effect, and the greater the angle *pft* formed by the line of traction and the forward direction. This I have termed the *angle of extraction*, which in Simpson's is seventy-five degrees. Per contra, the farther the line of traction *fp* is from the downward direction *fs*, the greater the forward and compressive effect, and the greater the angle *sfp*, which I would designate the *angle of compression*, and which in Simpson's is fifteen degrees.

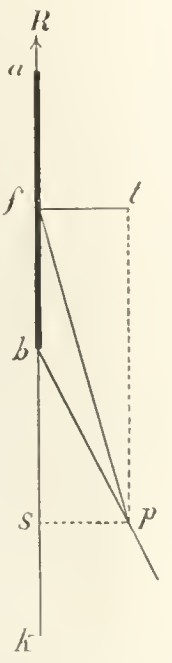


Fig. 6.

Since the three directions, *fs*, *ft*, *fp*, form the four sides of two triangles, and the two sides *fs*, *ft* form a right angle, if the two missing sides *tp*, *sp* are supplied equal and parallel to their opposite sides, we have then two equal triangles with a common hypothenuse. Now, if thirty pounds traction is applied to the end of the shanks at *p*, and acting along the line *fp* whose direction is downward and forward, the force will necessarily be expressed in the two directions, in direct proportion to the square root of the angles of extraction and compression, respectively, divided by the two together, multiplied by the square of the force. The formulæ therefore would be: for extraction, $\sqrt{\frac{75}{90}} \times 30^2 = 27$ lbs.; and for compression, $\sqrt{\frac{15}{90}} \times 30^2 = 12$ lbs. Because the square of the hypothenuse being equal to the sum of the squares of the other two sides, and the hypothenuse being $\frac{75}{90}$ of a right angle away from the forward and consequently in the downward direction, we have $\frac{75}{90}$ of 900 (30^2) or 750 as the square of the downward direction of which the $\sqrt{}$ is twenty-seven pounds. And because the angle of compression shows the hypothenuse to be $\frac{15}{90}$ of a right-angle away from the downward direction and so much nearer the forward direction, we have $\frac{15}{90}$ of 900, or 150, as the square of the forward direction, of which the $\sqrt{}$ is twelve pounds. Consequently, thirty pounds traction, in the best possible direction in Simpson's forceps, gives twenty-seven pounds extraction in the axis of the superior strait, and twelve pounds compression against the anterior wall.

It is obvious that, in this synthetical proceeding with the two equal triangles and their common hypothenuse, we have constructed the parallelogram of forces *sftp* with its resultant or diagonal *fp*. This result in a favorite forceps is far from being an ideal one, yet it is the best possible effect attainable by a single force applied to the ordinary forceps having a similar pelvic curve. The greater the curve, and the farther from the vulva the instrument is seized, the greater the angle of compression, and consequently the greater the forward and compressive effect.

If we enter into a combination of forces, in such a manner, as to produce by a simple device a multiple force, we can by co-ordinating the elements of this force neutralize the tendency to antero-posterior rotation, and thus make traction in the direction of the axis of the superior strait. In the evolution of such a force, it is absolutely necessary, despite all the arguments for tapes, cords, and hinges, that every momentum of force applied be under subjection to the muscular sense of the operator.

In the construction of my ideal forceps, I have adopted the Simpson blades *A* (Fig. 7) and shanks *B*, and the Elliot handle *C*. These are too well known to need any specific description. The handle, however, has been rendered thoroughly aseptic by making the rubber side pieces *DD* detachable. The thumb-wheel also has undergone modification, and serves as a part of an excellent lock. The axis-traction attachment, *E*, is a simple, single rod loosely connected to the instrument at the decussation of the shanks.

It will be seen that the general aspect of the instrument, without the axis-traction attachment, is a very familiar one. The axis-traction attachment which I have invented consists of a steel rod bent into a hook on the extremity, *b*, which is received into a socket, *a*, between the shanks; 4 ctm. from this hook bend, it curves, at *c*, backward, away from the forceps handle, until it meets the line of the axis of the blades. Here it terminates in a ball, *d*, received into a clamp-socket, *e*, secured by a thumb-screw, *f*, and attached to a rubber cross-bar, *gg*. In order to secure the blades firmly when in position, I have invented a very simple lock, which consists of the ordinary Elliot wheel, *h*, and threaded bar, and an additional wheel, *i*, on the opposite or left-hand segment of the handle, which has in its centre a half-threaded slot, *j*. When this lock-wheel is in the open position, the bar of the opposite wheel can pass through this slot unimpeded; but by a quarter turn of the lock-wheel (its limit of motion because of a ¼ circular slot and pin, *kl*) the threaded part of this wheel is brought into coaptation with the threaded part of the bar, and a perfect lock is thus secured. A similar motion in the opposite direction opens the lock instantaneously. There is a small knob, *m*, on this wheel, by means of which the turn can be effected by a single finger. Usually the thumb locks it, and the little finger opens it. Turning the opposite wheel increases or diminishes the tension of the lock. In fact, by turning this right-hand wheel we can force the blades apart without deranging the lock.

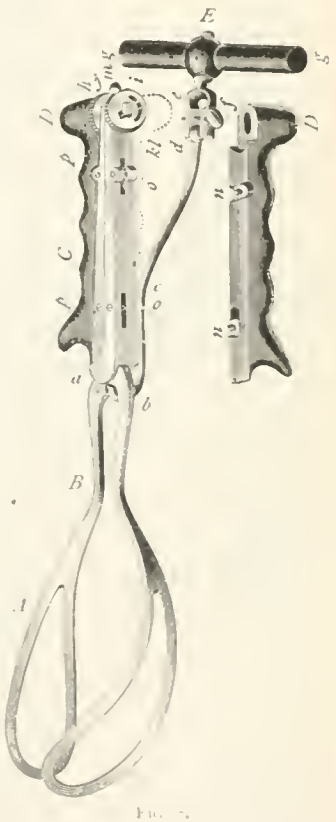


Fig. 7.

To render the handle aseptic, I have invented an arrangement of screws in such a manner as to make the rubber side-pieces, *DD*, detachable. This permits of every part of the handle, including the lock, being cleansed with soap and water, etc. Fastened into each rubber piece, at a certain distance, are two small flat pieces of steel, *nn*, which project, and enter into grooves, *oo*, in the metallic part of the handle. Each of these steel pieces, or lugs, has a hole bored through it, and broken through in front. Through this breech a flat screw, *p*, is received into the round hole of the lug. These screws, when turned one fourth of a circle, cannot escape through the breeches of the lugs, and thus hold the rubber pieces securely to the metallic portion. The screws pass from before backward in the metal, are threaded only on the distal end, and are loosely fitted so as to be turned if necessary by the finger-nail.

Such is the mechanism of the instrument; familiar blades, shanks, and handles rendered practically aseptic, efficiently locked, and supplied with a traction-rod that allows the force to be applied in the most desirable direction.

In considering the action of the instrument as a whole, we must remember that the same forceps, without the

traction-rod. gives us an angle of compression of fifteen degrees, and consequently twelve pounds pressure against the anterior wall, for every thirty pounds traction applied to the end of the shanks.

This arrangement of the traction-rod permits of every conceivable motion, which, though limited only in extent in the pivotal joint. *p* (Fig. 8), is complete and adequate in the ball-and-socket joint, *d*.

When traction is made on the cross-bar *gg*, the traction-rod, *pcd*, becomes a lever of the second kind, having its power at *d*, weight at *c*, and fulcrum at *p*; and the force is simultaneously expressed in three different directions, *pr*, *pn*, and *Rfdk*.

The first apparent effect of traction on the cross-bar is to pull the shanks backward upon the perineum, in the direction *pr*, and hence produce anterior rotation of the blades. This, however, is only apparent; for the instant it begins to become a real, active, kinetic force, it is checked by the lever action of the traction-rod, expressed as a force at *c*, but conceivable only as spent in the direction *pn*. We know that two opposing forces acting at the same time without producing rotation must be considered equal, and expressed in the same straight line. Hence I have expressed the force *cn'*, as exerted in the direction *pn*, directly opposed to the posterior force *pr*, and acting in the same straight line.

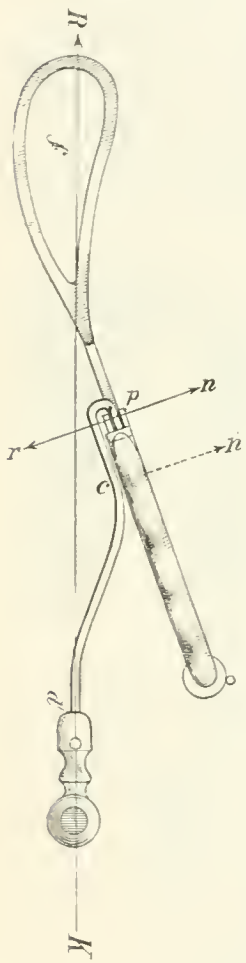


Fig. 8.

This tendency to anterior rotation of the blades, which is always present, being thus neutralized, renders posterior rotation impossible, and insures against slipping.

Guarded in this manner, traction can be made in the axis of the blades by simply bending the rod backward to the desired extent, and then turning it into the line of the direction of the axis. *Rfdk*.

It is obvious to the close observer that the co-ordinated elements of the force. expressed by traction on the crossbar. are similar to those less well regulated in the method of Osiander. Pajot. and Hermann; and that the force in my instrument is exerted in the direction of the axis of the blades with mathematical precision. It is also clear that it does not demand the dexterity of the expert operator to achieve success. as in the case of the above mentioned method. and the many so-called axis-traction forceps so much vaunted, and by some good men equally condemned.

To conclude, some of the advantages of this instrument may be summarized as follows:

1. The blades, shanks, and handles are familiar favorites with a large number of the profession.

2. These favorite parts have been rendered amenable to the laws of practical asepticism—not mere disinfection, but absolute cleanliness.

3. That apparently useless wheel and bar in the Elliot handle has been transformed into a serviceable and efficiently practical lock operated by a single stroke.

4. If circumstances should prove that the ordinary shanks are too short to permit of the blades grasping properly the head situated too high, as it may happen. the rubber pieces can be instantly removed. and the shanks thus prolonged to the desired length. This may be done without affecting the utility of the lock or the axis-traction attachment.

5. The traction-rod is attached to the end of the shanks, instead of rods or ropes passing all the way into the vagina. and even into the uterus. Guided by the commonest teaching in the obstetric art, we can only find it absolutely unnecessary to have four shanks passing through the vagina.

6. The traction-rod. simplicity itself, is free from all rust- and rot-inviting, fragile joints and hinges, and is made of such proportions, without being clumsy, as to endure an immense force without strain or fracture.

7. It leaves to the fœtal head every motion incidental to the mechanism of labor. In the pivotal joint there is a possible rotation around the vertical, antero posterior, and transverse axes of the blades. but of course limited to a certain degree. In the ball-and-socket joint, however, there is no limit to the available motion.

8. The advantages of a single rod over complicated double traction-rods are many and obvious.

9. The direction of the tractions is positively in the line of the axis of the blades.

10. We have, in the part of the rod that lies in the axial line. an index to the axis of the blades, and consequently to the direction in which traction should be made. The clamp-socket piece and cross-bar should therefore be always in a line with it. This is always true when the straight part of the rod following the hook is parallel and in contact with the back of the handle.

11. When the head has passed the superior strait, the traction-rod can be removed. leaving an ordinary favorite instrument to complete the labor.

12. The whole arrangement of the instrument is so simple. that any ordinary practitioner can use it with the happiest results.

There are but two essentials to be observed in the use of this instrument. one of which is that strenuously urged in the use of the common forceps: Never allow the shanks to leave the perineum until the fœtal head has passed the superior strait. The other, which in a degree is dependent on the former, is: Keep the straight part of the rod following the hook parallel and in contact with the handle, and the clamp socket-piece in a straight line with the straight part of the rod near the ball.

213 West Twenty-third Street.

The Alleged Poisoning of the Pope's Physician.—The authorities of Rome, soon after the death of Dr. Ceccarelli, received several anonymous communications alleging that the eminent physician had been poisoned. The instant this charge became known, *The Lancet* states Professor Lapponi, assistant to Dr. Ceccarelli and the responsible physician in attendance on his ailing chief. came forward and gave a categorical denial to the said charge, reinforcing his testimony with that of the other three eminent physicians whom he had called in consultation. Notwithstanding this authoritative declaration, the President of the Court of First Instance ordered the immediate exhumation of Dr. Ceccarelli's body and caused the alimentary tract to be minutely examined by the experts of the court, with a view to the detection of the supposed poison. The result of this examination was to confirm in every point Dr. Lapponi's diagnosis embodied in the death certificate, according to which Dr. Ceccarelli "died of peritonitis supervening on intestinal ulceration induced by catarrh." The motive for Dr. Ceccarelli's "removal," as given by the anonymous accusers, was that he possessed many of the Vatican secrets and had lately shown signs of restiveness, so that it was feared that he might tell what he knew. The true reason for these charges was. it is believed, that someone of the natural heirs of the dead physician was angry because most of the property had been left to charitable institutions, and thought that this might be a means of breaking the will.

A Case of Renal Calculi in a child one year old was reported by Dr. Matton at a meeting of the Anatomical Society of Paris, held January 8, 1892.

DESCRIPTION OF A NEW SACRAL OPERATION PERFORMED BY PROFESSOR GUSSENBAUER, OF PRAG.

By GEORGE E. ABBOTT, M.D.,

NEW YORK.

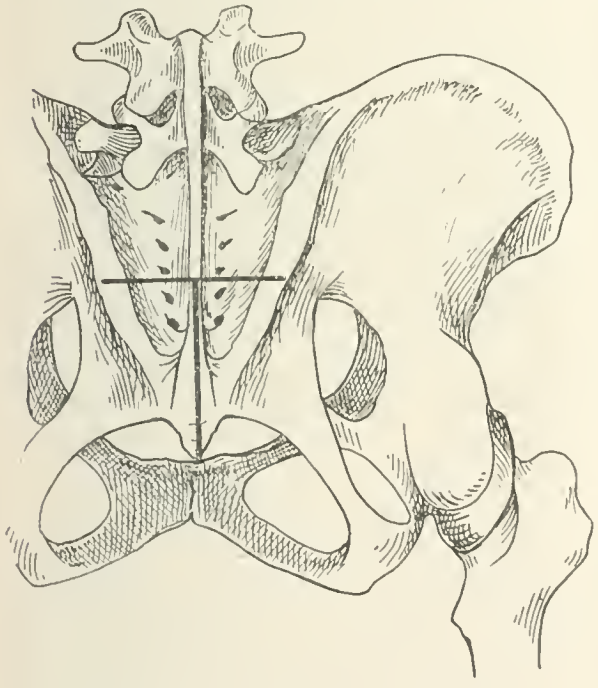
A FEW days since I had the pleasure of seeing Professor Gussenbauer, surgeon to the Imperial Royal General Hospital of Prag, perform his new sacral operation for resection of the rectum.

Although an operation upon the rectum, I have headed it "a sacral operation," for it is the technique of dividing the coccyx and sacrum in the median line and thus opening the pelvic cavity for operations upon its contents that constitute the originality and advantages of this procedure.

The patient was a man thirty-one years of age. Firm pressure upon the perineum, with counter-pressure upon the hypogastrium, enabled one just to touch the lower border of a hard, dense mass high up in the rectum. A diagnosis was made of cancer of the rectum.

The operation was begun by an incision to the bone, in the median line, from the tip of the coccyx up the sacrum for five inches (12 mm.) in length. This was converted into a T by a transverse incision also five inches (12 mm.) in length. There was but slight hemorrhage. These flaps were not dissected up, but with a sharp saw, under irrigation, these same incisions were carefully carried through the coccyx and sacrum, the irrigation carrying the little bony chips out of the wound.

It will be seen that there had thus been made two triangular flaps of integument, still attached to the bone, each composed of one half of the coccyx and of the three lower sacral vertebræ. These were easily separated from



A New Sacral Operation. Professor Gussenbauer, of Prag.

the connective tissue binding of the peritoneum and carried to either side, giving a fine view and a large field for operation upon the pelvic contents.

Professor Gussenbauer was disappointed in finding the cancerous mass so adherent that he was obliged to abandon the resection in favor of total extirpation of the rectum. Personally I was very glad, for as he extended his incision from the tip of the coccyx to and around the anus and proceeded with the operation, especially the latter part of the extirpation, I saw that his previous work gave him a marked advantage in operating, and that this increased room and facility of attacking parts high up or deep in the pelvis would be of just so much more advantage to those less skilful in operating.

The extirpation was completed and healthy gut brought down and sewed to the integument for a new anus, as usual. Then the bony flaps were returned to their places, being held by catgut sutures through the periosteum only, and silk sutures were passed through the integument. The inter-recto-coccygeal space was tamponed with iodoform gauze and the wound was dressed as usual.

The cancer occupied three inches (8 mm.) of the upper part of the rectum. I saw the wound dressed in the ward a few days afterward: it appeared very healthy, and the patient was doing well.

At this writing, three weeks after the operation, the entire external wound has healed by first intention; pressure upon the lower sacrum and coccyx meets with a good resistance and produces no crepitation. The patient turns easily in bed and is in fine condition.

Professor Gussenbauer kindly allows me to send this report of the technique of the operation, although he is not yet ready to report upon the operation as a whole.

PRAG, April 8, 1893.

Clinical Department.

STRICTURE OF THE URETHRA EXISTING FOR TWENTY-FOUR YEARS—OPERATION—DEATH.[1]

By W. B. ARBERY, M.D.,

ANNISTON, ALA.

I DESIRE to report a case in surgery which, from a modern acceptation, was not a brilliant success, in that my patient did not survive to sound my praises or enjoy the benefits of the treatment; but I trust that, considered from the standpoint of scientific and conservative surgery, it may be of interest and benefit to my readers, and that my treatment may receive their endorsement.

On February 2, 1893, W. L. M——, a telegraph operator, aged thirty-eight, weighing about one hundred and fifteen pounds, of thin and delicate appearance, came to my office for treatment of a bladder trouble, as he said, with the following history: Twenty-four years ago he had suppression of urine, with a previous history of gonorrhœa (the exact nature of the gonorrhœal attack and its treatment he did not volunteer to tell me about, and I failed to otherwise elicit any information concerning it).

He was fourteen years of age when he had the first suppression of urine. The physician tried to introduce a catheter, but failed, and another physician was called to assist the first one. They gave him ether, and tried again, but failed again; then he was placed in a tub of water as hot as he could bear it, which finally caused relaxation and enabled him to void his urine. His physician then commenced a treatment with him of sandalwood, copaiba, cubebs, and other medicines, and kept them up for many months without benefit, and also gave him a metal sound (which, judging from the size which he selected from my case to show me, must have been about a No. 10, American scale). He was told to insert this sound in his urethra every two to three days, introducing it a little further down the urethra each time until his bladder was reached. This, he said, he was told to do of his own knowledge and not shown how or told of its intended mode of action or results: he only tried it a few times and finding it painful, and without any good results, he left it off and had not been touched in an operative way since.

He then gave me a long recital of his sufferings from the time of his first suppression of urine up to the day he called at my office, which was painful to listen to and enough to excite the sympathy of anyone. During this time he had had several attacks of orchitis, one danger-

[1] Read before the Calhoun County Medical Society, April 4, 1893.

ous hemorrhage from his urethra, the two latter coming on from over-exertion, a continuous and painful desire to urinate, and many attacks of suppression of urine which he would relieve by bathing with hot water, or injecting hot water into his urethra. For eight years he had carried a hard rubber urethral syringe in his pocket, for the latter purpose. For years he had been forced to void his urine every two hours, night and day, and sometimes oftener, breaking his rest at night, and giving him great annoyance in attending any place where he could not conveniently void his urine, as when the desire came it had to receive immediate attention. I told him I thought he had a stricture, and proceeded to examine him, but before commencing the examination I requested him to void his urine in my presence, that I might see the character of it and judge of the flow. He did so with a straining effort, the urine dribbling out in a very small stream and drops as though there was no *vis a tergo* whatever to force it forth.

I then proceeded to introduce some sounds, and finding the urethra very sensitive and irritable, I introduced cocaine, and commenced with a No. 9 (American scale) sound, and came down to the very smallest, but failed to enter the urethra with any of them. I then resorted to the filiform whalebone bougies, and succeeded in introducing one far down, the first time, but not into the bladder, passing I did not know how many strictures, but told him his urethra was full of them. He made visits to my office every other day and I soon succeeded in dilating the urethra up to a No. 6 sound (American scale), but the strictures seemed inelastic, and beyond this would not dilate without using greater force than the patient could stand without an anæsthetic, even though the parts were well under the influence of cocaine. With a bougie-à-boule I made out three strictures down to a fourth, which latter I could not pass. These three being irritable and inelastic, thinking it would require a long and painful process of dilatation, I proceeded to cut them after about a fortnight's treatment, which I did under the influence of cocaine without much pain or shock—using a Maisonneuve urethrotome. I cut the three at two different times, at night, and the patient was out the next morning, not having to remain in bed a single day from the operations. After cutting the three as described above I proceeded to dilate with sounds numbering from 9 to 23 inclusive, daily, for many days. During this time I tried each time with filiform and other sizes of sounds, to dilate the fourth stricture. I succeeded in getting one filiform through the stricture into the bladder once, after which I could get two to three of the filiforms to enter the stricture, but no farther, the stricture seeming to grasp the instruments as if it were a spasmodic. I found the stricture to be hard and fibrous.

Failing to enter with the use of cocaine, I decided to make a more effectual effort, if possible, by thoroughly etherizing my patient, and accordingly made an engagement with a colleague to administer ether, but it occurred to me before attempting the use of ether, to examine his urine, chemically, to ascertain if his kidneys were free from disease. Getting a specimen of his urine and filtering it through two separate filtering papers, and making the test, I found it loaded with albumin, and so I desisted from giving him the ether; and on account of his frail physical condition I thought it unsafe to use chloroform, so I directed him to take large potations of flaxseed tea, as I had from the commencement of the treatment, together with large doses of acetate of potash, thinking maybe the albumin might be due to a temporary congestion of the kidneys. After several days I examined the urine again, only to find it loaded with albumin as before, and from this disclosure and his general appearance, I decided that, along with his other infirmities, I had discovered the impress upon his system of a sure death-warrant in Bright's disease. His circulation was very rapid, one hundred pulsations to the minute, of a nervous and irritable character, and had been so for years, so he informed me, and an Anniston physician informed me that he had examined him three years ago for life insurance, and that he was rejected on account of his rapid pulse.

The cutting of the three strictures greatly relieved him in voiding his urine, enabling him to go twice as long without emptying his bladder, giving him from three to five successive hours' rest at night, and so he felt greatly encouraged.

I continued my dilatation of the cut strictures down to the fourth stricture with large sounds, and also continued with the filiforms, trying to dilate the fourth away down in the membranous portion of the urethra. I tried to introduce the Maisonneuve urethrotome through the stricture so as to cut it, but could only get the point in and could not introduce it far enough to allow the knife to cut the stricture, so I resorted to Gross' exploratory urethrotome, on March 18th. I used only cocaine, as in the past, and cut through the stricture without any trouble. I found the stricture very hard and fibrous, and when the point of the urethrotome touched it there was a grating feeling as though it had struck bone, or a calculus. I found the stricture to be near half an inch in width. On withdrawing the urethrotome I immediately inserted a No. 6 (Am. scale) sound through the stricture into the bladder, inserting my index finger into the patient's rectum, to assist in guiding the sound into the bladder. On introducing my finger into the rectum I was horrified to discover the immensity of the stricture, which I could distinctly feel just posterior to the perineal body, about two inches from the bladder. It consisted in a hard, smooth, symmetrical ring entirely encircling the urethra, fully one-fourth of an inch in width and raised above the other portion of the urethra for fully the same distance, like a ring on the finger, solid, like a tumor. I suppose the stricture had commenced with a slight irritation in the urethra, and, continuing through these twenty-four years of its history, had thickened and enlarged to its present proportions, with its indurated and raised ring extending through to the outside. Back of the stricture the urethra was enlarged, forming a sac between the bladder and stricture which the patient had before described to me, as a fulness or bulging occurring every time he urinated; and he stated that it was his necessary habit to place his fingers there and press, sometimes to start, but nearly always to finish the flow. The bladder proper, as near as I could examine with my finger far up the rectum, was small, firm, and thickened. Considering the nature and history of the stricture, it is a great surprise that a fistula had not resulted from the constant strain that was put upon the parts. My patient was a married man with one child fourteen years old, and I am sure was incompetent to perform the successful sexual act, as the urine at best could only dribble away from a flabby penis; and with the organ in a state of turgescence, I feel safe in concluding that no semen could pass. I questioned him as to the enjoyment or frequency of the sexual act, and he told me that he enjoyed the same pleasurable sensation, but the desire was far from what it formerly was. The semen, no doubt, was thrown from the ejaculatory ducts into the urethra and passed backward into the bladder as its only exit, and there decomposed and diseased that organ. I allowed the sound to remain in the bladder for fully five minutes, the patient resting comparatively easy on a couch, talking and exulting over the fact that his bladder had been reached. There was a slight hemorrhage from the cutting, and the urine continued a little bloody through the night, but was clear the next morning, and continued so. A few minutes after the operation he became nauseated and vomited freely, and a few minutes later had a pronounced chill. Two hours later his circulation was 120 to the minute, and his temperature 104.5° F. I ordered flaxseed poultices placed in contact with the membranous portion of the urethra under the scrotum, gave him a dose of acetanilide, and put him on frequent doses of tincture of aconite and nitre. Next morning his scrotum was swollen to a good size and had a dark congested appearance, temperature 102° F., pulse 120, as before. His scrotum and testicles continued to

inflame and swell, growing tense and painful. I continued the hot poultices, alternating with flaxseed, poppy leaves, and cranberries, enveloping the whole scrotum, and gave my patient a dose of Epsom salts and frequent and small doses of antimony and henbane, with apparently some relief. The next morning, two days after the operation, there was no amelioration of the symptoms, and the scrotum was swollen to about the size of two large fists doubled together, and presented the character of deep erysipelatous phlegmonous inflammation.

The dependent part of the scrotum being a little soft and fluctuating, I thought of acute hydrocele, and explored with a hypodermic syringe, getting a few drops of offensive, bloody discharge, apparently a mixture of pus and blood. I then inserted a large size trocar and cannula and slowly drew off, as if by large and frequent drops, six ounces of this sanious and offensive discharge. I drew this from the left septum of the scrotum, and with my lancet opened up the right side with two small incisions on the most dependent part. From the openings the trocar and the lancet made, this discharge kept up with a continued and rapid drop. Seeing the depressing effects of the malady, I commenced to nourish him with hot sweet milk and Valentine's beef extract, giving a tonic every three hours consisting of digitalis, nux-vomica, iron, and cinchona. On the morning of the third day the scrotum was in a gangrenous condition, and, after consultation with a colleague, I freely incised it, causing scarcely any pain, and then kept Labarraque's solution (diluted) constantly applied. I gave him fifteen grains of boracic acid and thirty drops of muriated tincture of iron, alternately every three hours, with milk-punch and beef extract, as much as the patient could appropriate. He grew delirious, and at the close of the day could not swallow. Rectal feeding and hypodermic medication were resorted to, but all to no avail, for he died at midday, on the fourth day of his illness.

My instrumental treatment of the patient was all under thorough antiseptic precautions, using a 1 to 500 bichloride solution on every instrument before inserting. So far as my experience or medical research extends, this case is unique as to the size of the stricture, it having formed itself into a hard, fibrous, symmetrical tumor, entirely encircling and being a part of the membranous portion of the urethra, in size I should say about three-fourths of an inch in diameter, about one-half inch in width internally, and one-fourth of an inch externally.

Considering the gentleman's intelligence, it might be a surprise to think that he had neglected himself so long, but the reason given why he did so was that he thought that all had been done for him that could be done, and so he just resolved to submit to the inevitable.

TYPHOID PNEUMONIA.

By J. M. WARD, M.D.,

CORNELIA, MO.

Dr. J. H. Girdner, of New York, reports two cases of pneumonia that proved fatal, and suggests that as the nurse was the second case, the disease was contagious. If he had had forty-four cases as severe, the result would have been the same, *i.e.*, one hundred per cent. of deaths. It strikes me, a Western man, that he had two cases of typhoid pneumonia, and that he failed to relieve the congestion in the early stage, and the result was hepatization and death. I have had a large number of such cases this winter and spring.

Now, then, what is typhoid pneumonia? It is a peculiar form of pulmonary engorgement quickly followed by inflammation and hepatization. The peculiarity is caused by some atmospheric influence that places the system in an adynamic condition. Such cases show hepatization in twelve or twenty-four hours after the initial chill, and the only salvation is early treatment that will arouse the nervous system and equalize the circulation.

My treatment was an emetic of ipecac as soon as I could reach the patient, or I sent it if I could not go. Then free perspiration was induced by pilocarpine or the alcoholic vapor bath. This was followed up with camphor and opium, muriate of ammonia and nitrate of potassium every three hours, with carbonate of ammonia in the interval and quinine during the night. Blisters were applied early, generally at the first. Digitalis, strophanthus, and whiskey were used for heart failure. The bowels were moved by injection. Some cases, after the chill, showed more congestive than inflammatory symptoms. The temperature and pulse were little above normal, but in two days the temperature would run to 104° or 105° F., and prove fatal. I soon learned that every case must be treated vigorously from the start. When this was done the success was good except in aged persons. I don't take it that a man has been infected by the pneumococcus simply because he has exposed himself and taken cold and that it requires the presence of the pneumoccocus to constitute a pneumonia. If the microbes are present, they probably are always there, and when conditions are right get in their work.

POST-MARITAL AMENORRHŒA.

Dr. F. H. Kalbfleisch, of Paisley, Ont., writes: "Having recently come across a case of non-menstruation after marriage, I wish to report the same through the Medical Record."

Mrs. L—— was married at the age of twenty-one. Before this she had always menstruated regularly. After her marriage she soon became pregnant and from that day to this there has never been any symptom of menstruation from any part of her body. She has had in all a family of nine children, the youngest being now nineteen years old. Mrs. L—— was always healthy. She has several sisters married who all menstruate naturally. Are such cases of frequent occurrence and can the cause be ascertained?

A PIN IN THE TRACHEA.

By HERBERT W. CARDWELL, M.D.,

PORTLAND, OREGON.

This report is made simply to add to the existing literature on the subject of foreign bodies. On January 18, 1893, I was called to see Miss Mary P——, a domestic in a family residing about three miles out of town. On arrival I learned that about two hours previously, while dressing, she had placed a pin in her mouth, and becoming startled by a knock at the door, had swallowed it. She was rather excited, and was not sure what kind of a pin it was, or how she had placed it in her mouth, head first or point first. Careful laryngoscopic examination failed to discover it, although she claimed to feel sharp, sticking pains just below the larynx. She was sent to the hospital for observation, and kept at rest on a diet of bread and milk. On the following days she complained successively of pain in the larynx, mediastinum, left epigastric region, umbilical region and right epigastric region. Then the pain disappeared, and after ten days in the hospital she insisted upon returning to her home. There had at no time been any indication for operation, especially as the patient objected strongly to such a procedure. After her return home she applied for treatment for a chronic uterine trouble and from time to time spoke of the pin and wondered what had become of it. On April 23, 1893, she had a severe attack of coughing and ejected the pin, point first. On examination it proved to be a steel shawl-pin, an inch and a half long, and with a conical black head, three-sixteenths of an inch in diameter, and, while much corroded, still very sharp. Upon returning the pin for examination she admitted that since the ingestion of the pin she had been subject to cough, chiefly nocturnal, which was of an irritative character and gave the impression of a foreign body in the larynx. The sputum has been from time to time streaked with blood.

There has been no pain since leaving the hospital. Since the ejection of the pin she feels no discomfort.

Where has this pin been for the last ninety-five days? I thought I was justified in believing that the pain in various points on successive days indicated a progressive advance on the part of the pin along the alimentary tract. Its ejection by coughing at such a late day seems to imply that it has been at some point in the respiratory tract all the time. Inspection of the pin would make any one sceptical regarding the possibility of such a foreign body remaining in any portion of the respiratory tract for any length of time without causing trouble, and yet, for ten days at least, there were no symptoms of irritation of either larynx or trachea.

Progress of Medical Science.

Tuberculous Strictures of the Bowels and Their Treatment.—Dr. F. König observed and operated upon five cases of tuberculous stricture of the bowel, a disease the clinical appearances of which are so typical as to present a picture with striking characteristics (*The Annals of Surgery*). The patients' ages varied from twenty to forty years, only exceeding this in one case. In this a woman aged fifty-two. The patient had suffered from gastric symptoms which developed slowly; pallor and emaciation appearing simultaneously. Later there occurred attacks of colicky pains pointing without doubt to stricture of the bowel. With varying frequency several times a day, and again less often, the abdomen became the site of painful distention; loops of bowel with serpentine movements and a splashing noise is noticed upon succussion. The attack terminates by the contents of the bowel being forced through the stricture; in the meantime a characteristic noise, as if a fluid is pressed out of a syringe, becomes audible upon auscultation. Immediately the abdomen flattens and the patient is relieved for a time. Operation discloses conditions corresponding to the picture of the disease. The stricture of the bowel originating from the tuberculous ulcer of the bowel is found with considerable lessening of the lumen from cicatrization. Above this point the bowel is greatly dilated with hypertrophy of the muscular coat; below, the bowel is contracted, or rather atrophied. Typical circular resection of bowel for the removal of the obstruction is indicated, as well as removal of the affected mesenteric glands. This procedure is justified by the fact that, as a rule, the tuberculous affection of the bowel in these cases is circumscribed and localized, and, as shown by the cicatrization, has an intrinsic tendency to recovery. The diagnosis of a stricture due to tuberculosis will sometimes be suggested by other existing tuberculous affections. Two out of König's five patients died soon after the operation; one from asthenia and one from peritonitis due to failure of the suture of the bowel; one of three patients who recovered was in good health two years afterward; the two others were operated upon more recently. These, likewise, had gained very much in general health and weight.

Remarks on the Scope and Origin of Fibroid Phthisis.—Dr. Auld urges the separation of tubercular from non-tubercular fibroid phthisis, insisting that the latter exists, and citing the following case to prove it: Man, aged thirty, tinsmith, ill for ten years with a pulmonitis. Troubled with cough; yellow, occasionally blood-stained, expectoration, which lately became fetid, and pain in the chest. Respirations were 22, right side of chest flattened and dull on percussion. Temperature ranged between 99° and 103° F. When seen later the left lung had become involved, as shown by retraction, dulness, and tubular breathing in the supra- and infra-clavicular regions, etc. The sputum carefully examined showed no tubercle bacilli. Hectic was present. After death Dr. Coats performed the autopsy. The right lung was so adherent to the chest-wall that it had to be dissected out. It contained several cavities of large size, lined by a perfectly smooth membrane considerably sacculated. Hardly any lung tissue was left, and no trace of active disease could be found. The left lung was united to the chest-wall by adhesions of almost cartilaginous consistence. The lower lobe was shrunken and consisted of dense fibrous tissue of dark gray color. In the midst of this tissue were frequent collections of a pultaceous and calcareous matter. The rest of the organ was the seat of apparently recent lobular condensations and otherwise œdematous. The other organs were healthy. Careful microscopic examination made by Dr. Coats and the writer revealed entire absence of tuberculosis. To the writer this case suggests the possibility of frequently occurring cases of fibroid phthisis, in which the tuberculosis present is an accidental and late complication, having nothing at all to do with the original trouble.—*University Medical Magazine.*

Intrinsic Nerves of the Kidney.—A contribution to the subject of renal innervation has been published by Dr. Berkely, in the "Bulletin of the Johns Hopkins Hospital." The author has found that the renal nerves enter with the vessels at the hilum, and that with their multifarious ramifications and ganglionic enlargements they form a not inconsiderable portion of the kidney's entire substance. From the vascular nerves—which we may call the primary ones—come secondary divisions, distributed throughout all the cortical and medullary-cortical regions in the form of a vast open net-work. That the glomeruli are surrounded by a wide-meshed plexus of fibres having terminal end-knobs approximated closely to the Bowman capsule, but that no finer nerves can be seen penetrating that membrane: and end-terminations within the capsule upon the convoluted vessels, either in the form of knobs, or in the finer-pointed terminations cannot be discovered. That fibres pass off singly and separately from the vascular nerves, and are distributed on the convoluted tubes, not only with end-terminations in the form of the well-known globular ending, but also in fine delicate threads that penetrate the membrana propria of the tube, and presumably enter the cement substance between the epithelial cells; and that the function of these divisions to the tubuli contorti is probably one concerning the urinary secretion. Lastly, that ganglionic enlargements occur widely, but that, strictly speaking, no nerve-cells provided with nucleus, body, and protoplasmic arms, are to be found; and that all renal nerves belong to the sympathetic system.

Weather and Pneumonia.—The effects of various meteorological conditions upon the development of croupous pneumonia are discussed in considerable detail in Dr. P. J. Kolski's graduation thesis in the University of Moscow. He gives statistics of the disease and of the different meteorological conditions in Moscow for many years past, together with elaborate diagrams (*The Lancet*). He believes that though changes in the weather may not be the main cause of pneumonia, as they were at one time thought to be, still the modern tendency to ascribe everything to bacteria is to be resisted, for, according to his researches and observations, meteorological variations certainly play a not unimportant *rôle* in the etiology of the disease. Generally speaking, it may be said that abnormal weather is favorable to the development of pneumonia. The greatest number of cases has been found to occur in Moscow under the following conditions: A temperature lower than usual with very few diurnal variations, abnormally high barometric pressure, a north wind of less than its ordinary force, and a small amount of rain or snow. Dr. Kolski does not agree with Seibert that pneumonia is especially rife when there is an absence of parallelism between the temperature curve and the curve of relative humidity, and he considers that the common opinion that strong winds are favorable to pneumonia has no foundation, for, as a matter of fact, the years when the wind has been high have been the very years during which there has been but little pneumonia.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE CHANCES OF SUCCESS IN MEDICINE.

PRESIDENT CHARLES F. THWING, of Western Reserve University, has made a number of interesting educational studies, and among these is an article in the current *Forum* on "College Men as Successful Citizens." He has taken "Appleton's Cyclopædia of American Biography" and examined the contents with reference to the occupation and education of each person whose history is recorded. The Cyclopædia contains biographies of 15,142 persons, and it assumes to include all Americans whose life-work has been sufficiently successful to entitle them to a record. It is interesting to note the number of medical men in our country's history who have distinguished themselves. This number is exactly 912. As the prominent clergymen number 2,744; soldiers, 1,752; lawyers, 1,678; statesmen, 1,310; business men, 1,105; authors, 1,124; artists, 630; educators, 1,016; scientists, 522, it will be seen that the number of eminent men among physicians is about half that of lawyers and one-third that of clergymen. It would not be far out of the way to assume that about three hundred thousand doctors have started out in life in this country during the present century, and, if that be so, the chance of a doctor becoming famous is one in three hundred.

Of the 15,000 distinguished men in the Cyclopædia 5,326 were college bred, and among these 473 were physicians. In other words, one-half the distinguished physicians in this country were college-educated men. The chances of becoming distinguished are, therefore, enormously increased by such a training.

Here is a fact which the American Academy of Medicine ought to herald abroad, for it is the strongest evidence yet furnished in favor of their propaganda. If a young man who has chosen his profession knows that his chance of succeeding in it will be increased from 1 in 300 to 1 in about 6 by a certain course, he will, or at least he ought, to make great sacrifices in order to take advantage of this, for it will pay him in the end.

THE CURE FOR WINE, WOMAN, AND SONG.

DR. FRANK KRAFT, of Cleveland, writes, in the *Medical Advance*, on wine, woman, and song, with special reference to their therapeusis. Dr. Kraft finds that excesses in wine, or rather in alcohol, breeds three kinds of drunkards, each of which is best set up by certain remedies. These are his three pharmaco-clinical types: "Nux vom. for the beer drunkard; gelsemium for the 'champagne' drunkard; and sulphuric acid for the 'rot-gut' whiskey drunkard." It appears from this that the hard drinker has only to make an intelligent diagnosis of himself and then fill his pockets with a bottle of sulphuric acid, nux, or sempervirens, as the case may be, in order to keep in good condition.

"Woman," Dr. Kraft thinks, "has caused man considerable trouble," and this cautious estimate of social history will not be generally disputed. We turn with some interest to find the drug which solaces man when he has had embittering experiences. Hyoscyamus we find is suited to relieve a disappointment in love so severe as to make the victim turbulent, talkative, and irritable. Henbane quiets the noisy lover. Belladonna helps the moody, sleepless, and dangerous man. Let the ladies take notice and reject their suitors not with a promise of continued sisterly interest, but with vials of the proper antidote. Nux vomica is for the passionate, sensual fellow who loves not well but for amorous ends, while staphisagria cures the man who is simply humiliated and mortified at his refusal. If disappointment in love makes a man swear, give veratrum, says Kraft; "if it makes him lie, give anacardium, and if it makes him a blackguard, give chamomile. If he is intensely erotic, let him chew camphor.

For the ills that come from song Dr. Kraft does not say much. He is vindictive toward tenors who sing too much, and thinks they may be helped by stramonium. For the ill effects upon man of the song of others his list is far too short, and includes only natrum mur., followed by sulphur and belladonna.

The foregoing is contemporary medicine, though it sounds like a dream-book. As practitioners of medicine we must look upon man and disease from every aspect, and Dr. Kraft furnishes us a very pleasing one.

THE DIMINISHING BIRTH-RATE OF THE UNITED STATES.

SOME months ago, in an editorial article on this subject, we called attention to the fact that, according to the last census, the birth-rate of this country was decreasing, and that the United States was not so very much better off than France, as regards fecundity. We are glad to see that Dr. J. S. Billings has taken up the idea thus advanced, and elaborated it into a careful statistical article which appears in the *Forum* for June. Dr. Billings finds that the birth-rate has fallen from 36 per 1,000 inhabitants in 1880 to about 31 per 1,000 in 1890. This decrease he finds to be greatest in the Southern States, and least in the Northeastern States. It affects both the white and colored population. The decrease, however, is greatest where the rate before was highest, and at the present time the birth-rate is higher in the South than in the Northeastern and Middle States.

For the New England and Middle States the birth-rate in 1890 was 23.43 per 1,000; for the Western States, 26.47; for the Southern States, 29.72; for the Pacific Coast, 20.69. The figures show also a progressive diminution in the number of children under the age of one year.

Tables are given showing that in European countries there is the same progressive decrease in birth-rates, and it seems to be a natural tendency of civilization that this

should occur. The rates as given are: For Austria, 37 per 1,000; for Germany, 35.7; for England and Scotland, 30.5; for Ireland, 22.5; and for France, 21.9. Austria stands at the head and France at the foot therefore, while England and the United States occupy a middle position. Since our death-rate is estimated to be 18 per 1,000, it is evident that the American people are not in any danger of immediate extinction.

THE REVIVAL OF TUBERCULIN.

At a recent meeting of the American Climatological Association some striking facts were given regarding the use of the supposed defunct tuberculin. Dr. Carl von Ruck reported 25 cases treated by this agent. Out of these, 5 patients, who were in the early stage, got well; among 7 more advanced cases, 6 recovered, and 1 was improved. Of 13 far-advanced cases 7 died, 6 are still alive, all being improved.

The initial used was $\frac{1}{20}$-milligr., and was gradually increased by tenths of a milligr. up to 1 milligr. Then the increase is by fifths up to 2 milligr.; then by halves up to 10; by doses of $2\frac{1}{2}$ up to 20; and thereafter by doses of 5 milligr. at a time. When a point is reached where the improvement is radical the remedy is withdrawn for from two weeks to a month. If there is no relapse the patient is simply kept under observation, but if there is a relapse a repetition of the treatment is necessary.

Dr. I. H. Hance, of Saranac Lake, reported 12 cases treated by Trudeau's modification of tuberculin.

In four of the cases the process was incipient; in five, advanced; and in three, far advanced. Three of the incipient cases were cured and no relapse has occurred, now after eighteen months. One has returned to the Sanitarium, but the process is confined to one lung and has assumed a more limited character than usual.

Of the advanced cases one is well (discharged eight months ago), as are three other cases discharged at later periods; the fifth has been lost sight of.

Of the far-advanced cases two were hopeless and are dead, and the third left the Sanitarium with the disease quiescent, but was suffering from gastric catarrh. Since then it has developed diarrhœa and is probably dead. In all of these far-advanced cases throat lesions were most pronounced.

The initial dose of the lymph is from 0.001 to 0.005, and is repeated daily unless the patient reacts, as evidenced by a rise of temperature to over 100° F. in apyretic cases, or above the daily average temperature in febrile cases, or by marked systematic disturbance. In any of these events the injections are omitted for a day or two, and the dose is more slowly and cautiously increased by from 0.002 to 0.005 at a time until 0.025 or 0.050 are administered. When this dose has been administered without any reaction for a couple of weeks tolerance has been established, and the injections can be given in more rapidly increasing doses. The largest dose ever administered daily without reaction was 1.8 c.c. When the lymph has been omitted for some time, subsequent treatment shows that the system is more tolerant than upon first treatment.

Taking these two sets of cases we find that among 10 incipient cases cure was effected in 9, and great improvement in 1. Among 12 advanced cases, 10 were cured, 1 improved, and 1 lost sight of.

These are certainly very satisfactory results, and are much better than those obtained by ordinary modes of treatment. Still it must be remembered that the cases were selected, and had the benefit of being in particularly good surroundings.

THE ASSOCIATION MEETING IN MILWAUKEE.

The forty-fourth meeting of the American Medical Association held this week in Milwaukee, a full telegraphic report of the proceedings of which appears in this issue of the Medical Record, was one of only average interest. None of the papers read was of extraordinary importance or could by any stretch of the imagination be described as epoch-making; yet there was a fair sprinkling of good ones—enough, at least, to make the meeting a fairly successful one. A feature of the section meetings, and one that is of promise for the future, was the higher tone of the discussions following the presentation of set papers in several instances, while the papers themselves were mediocre. The discussions which they elicited were instructive, and brought up many points of genuine value.

The anticipated battle over the Code question was avoided by the action of the Committee in asking for another year in which to complete the draft of a new Code. It was significant, however, that the changes which the Committee advised in its report would be radical enough to make the new instrument practically as liberal as the one adopted some years ago by the Medical Society of the State of New York, and which was the cause of the present "unpleasantness." It is safe to say, however, that the new Code will not be adopted next year without a pretty sharp struggle, for the conservative element in the Association may succeed in postponing the inevitable for a few years yet. The nomination of Dr. Hibbard to the presidency was in the nature of a compromise; yet the choice was a happy one, and the Association is to be congratulated upon having so accomplished a physician to preside over its deliberations for the coming year.

News of the Week.

Dr. John Turner, of Brooklyn, died on June 1st, at the home of his sister, at 101 West Fifty-seventh Street, aged seventy. He was born in Ireland, and was a graduate of the College of Surgeons in Dublin. He came to this country in 1847 and settled in Brooklyn. For several years he was attached to the medical staff of the Kings County charitable institutions.

A Graduate School for the Naval Medical Service.—The new Surgeon-General of the Navy, Dr. Tryon, will soon take steps to bring the medical corps up to the highest standard of efficiency, and out of the lethargy into which it has fallen in recent years. An order has been prepared by him which contemplates the establishment of what will be practically a graduate course for the young doctors who enter the service from civil life, to familiarize them with duties aboard ship. For years the naval laboratory at New York has been of little benefit to the service. Surgeon-General Tryon proposes to re-

vive it, and make it a school of instruction of medical science for the navy. The building now used for the laboratory is in every way well adapted to carry out the scheme of Dr. Tyron, and it will be equipped with all appliances to furnish instruction in hygiene and bacteriological and chemical work. The course will be of about three months, and it is the intention of the Surgeon-General to send all newly appointed surgeons to the school before they are ordered on shipboard. It is proposed to have the surgeons on the Examining Boards, and others on detached service in New York, serve as instructors for the first class.

The Medical Service at the World's Fair.—The medical and surgical service of the World's Fair is under the general direction of Dr. John E. Owens, who is assisted by Drs. Hillmantel, Allport, and Gentles, and by Miss M. R. Brown. There is an Emergency Hospital on the grounds with thirty-nine beds, divided into four wards, of which one is obstetrical. There are a number of substations with physicians and nurses attached. The emergency service is provided with four ambulances, fifteen ambulance men, and five drivers; and there are one hundred and fifty police and ambulance boxes at which calls can be made. The service was begun August, 1891, and it has so far administered mainly to the wants of employees. Up to May 18, 1893, there had been treated three thousand six hundred and thirty-one surgical, and four thousand and sixty-eight medical cases. Thirty deaths have occurred on the grounds. The arrangements and management of this department have reflected great credit on those in charge.

The Medical Society of New Jersey.—The next annual meeting of the Medical Society of New Jersey will be held in the West End Hotel, Asbury Park, on Tuesday and Wednesday, June 27, and 28, 1893, commencing at 11 o'clock A.M. on Tuesday.

International Dental Congress.—The Dental Congress which will assemble in Chicago, August 14th to 19th, promises to be well attended. The work has been divided into eight sections.

St. Luke's Hospital, New York.—The present site of St. Luke's Hospital has been sold for $2,400,000. Its original cost was $50,000. Ground has already been broken for the new buildings, which are to be models of architectural beauty and of poetical simplicity. There is no reason why they should not be among the finest in the world. They will be ready for occupancy early in 1895. Until that time the work of the hospital will be carried on in the present building at Fifty-third and Fifty-fourth Streets, as the trustees do not give possession of the land until the new hospital is finished.

William R. Leonard, M.D., died on May 31st, at his home in this city. He was born in Buffalo in 1846, and was graduated from the New York University in 1876. Dr. Leonard was a Fellow of the New York Academy of Medicine, and a member of the New York County Medical Society.

A Question of Sanitation of a somewhat complex character has been raised by the discovery that a demonstrator of anatomy, of one of the city's medical colleges, had been giving lessons on the roof of his house. The bodies were disinfected; nevertheless the sanitary ordinances seem to have been technically violated.

One of the Graduates of the Woman's Medical College of this city, Dr. Mary P. Eddy, will go to Syria and practise among the women of that country.

A Doctor who Wears Diamonds.—A Plainfield physician was recently thrown from his bicycle and lost a $500 diamond. We have not met any New York physician who could afford to wear diamonds of this size.

The Army of Doctors.—There are more than 105,000 names of practitioners of medicine in "Polk's Medical Register of the United States for 1893," including all the pathists.

The Late Professor Pacchiotti, of Turin, amassed a fortune of one million francs through his professional work. He bequeaths it in his will to various educational institutions.

Revue de La Tuberculose.—This is the title of a quarterly devoted to the subject of tuberculosis. It is edited by Verneine, and by Dr. L. H. Petit, and is published in Paris by G. Masson. Under therapeutics we note abstracts of articles upon the use of guacol and eucalyptol, inhalations of chloroform, injections of salol, creasote, and tuberculo-coidine.

The Late Dr. Charles Carroll Lee.—The Medical Board of the New York Foundling Asylum with sorrowful feelings deplores the loss of one of its members in the person of the late Dr. Charles Carroll Lee, an attending physician at this Asylum from nearly its inception, a quarter of a century ago. A man of courtly manners, he was at the same time most simple and kind-hearted. In the early years of his professional life he answered the trump of his country's call, and served with the army as Assistant Surgeon until the close of the war. The knowledge of his profession was varied, sound, and extensive, and he coupled with this a wonderful grace and tact that made him a most pleasant man to meet. As a citizen, relative, and friend, he was rich in the possession of a superabundance of civic and domestic virtues; and all these eminent attainments, added to the excellence of a spotless private character, were appreciated by not only his immediate colleagues, but the profession at large. It can safely be said of him that while he was a good physician he was a true man. Prompt and efficient in all that pertained to professional life, no laggard was he. We feel that he has passed to his reward, to enjoy the dawning of that celestial day that knows no night—the recompense of a useful and well-spent life.

Resolved, That to his bereaved family our respectful sympathy we tender: and that a copy of this preamble and resolution be sent to them. Also that a copy of the same be spread in a minute on the records of the Medical Board and published in the medical journals of this city.

J. Lewis Smith, M.D.,
George F. Carey, M.D.,
John P. McGowan, M.D.,
Committee.

Essential Points in the Law Regulating the Practice of Medicine in the State of Florida.—Chapter 3881, Laws of Florida, Sec. 7, makes it the duty of the Board of Medical Examiners to examine thoroughly all applicants for certificates of qualification to practise medi-

cine in any of its branches or departments upon the production of his medical diploma from a recognized college upon the following subjects, to wit: Anatomy, physiology, surgery, gynecology, therapeutics, obstetrics, and chemistry.

Sec. 8. When the Board shall be satisfied as to the qualifications of an applicant, they shall grant to him a certificate to that effect, which certificate shall entitle the person to whom granted to practise medicine in any county when the same has been recorded.

Sec. 11. The Board shall be entitled to demand and receive from each applicant examined the sum of ten dollars, whether a certificate be granted to such applicant or not.

Sec. 12. All practitioners who were engaged in the practice of medicine in any of its departments in this State prior to the passage of this act, shall, upon the production of a diploma from a medical college recognized by the American Medical Association, be granted by the Board of Examiners a certificate of qualification without further examination and without charge.

Sec. 13. The provisions of this title shall not apply to persons who have heretofore received certificates of qualification, and have recorded the same as provided by the Laws of this State heretofore existing, or to females who follow the practice of midwifery strictly as such.

Sec. 14. No person except those named in the preceding sections shall be permitted to practise medicine in any of its branches or departments without first having obtained and recorded a certificate of qualification from some authorized Board of Medical Examiners, as hereinbefore provided, and any person so offending shall, upon conviction thereof, be punished by fine not exceeding two hundred dollars nor less than fifty dollars, or imprisonment in the county jail not exceeding six months, or by both such fine and imprisonment, at the discretion of the Court.

Consulting Physician in Chief to the Hospitals of the Health Department of New York.—Dr. George F. Shrady has been appointed consulting physician in chief of the hospitals of the Health Department of New York.

New York Foundling Hospital.—At a recent meeting of the Medical Board of the New York Foundling Hospital, Dr. W. P. Northrup was elected to the vacancy caused by the death of Dr. Charles C. Lee.

New York Eye and Ear Infirmary.—Dr. Emil Mayer has been elected surgeon to the New York Eye and Ear Infirmary, Throat Department.

The Twenty-fifth Annual Commencement of the Woman's Medical College of the New York Infirmary was held at the Berkeley Lyceum, on June 2d. President Robert Haydock conferred the degree of doctor of medicine on twenty-four young women.

Public Notice of Infectious Diseases.—An order has been issued by the Board of Health that flags or cards shall be displayed upon houses in which contagious diseases may exist, each flag or card bearing the name of the disease existing in the house.

Maine Medical Association.—The forty-first annual meeting will be held in Common Council Chamber, City Building, Portland, Me., Wednesday, Thursday, and Friday, June 14, 15, and 16, 1893.

Society Reports.

American Medical Association.

Forty-fourth Annual Meeting, held in Milwaukee, Wis., June 6, 7, 8, and 9, 1893.

(Special Report by Telegraph to the Medical Record.)

First Day, Tuesday, June 6th.

The general session was called to order by the Chairman of the Committee of Arrangements, Dr. Wingate, at 11 A.M., in the Academy of Music.

Prayer was offered by Rev. Henry T. Secrist.

Address of Welcome.—His Excellency George W. Peck, Governor of Wisconsin, delivered his address of welcome to the State. He had been commissioned, he said, by nearly two million people whose good fortune it was to live in Wisconsin, to extend a greeting to the members of the American Medical Association. Wisconsin, he said, was a State that most people had heard of, and more would hear of in the future. Besides containing within its borders everything necessary for man's comfort except gold, it was the healthiest place to be found on the habitable globe. Doctors were entirely unnecessary, and the Governor did not know why they ever came to this State, or how they made a living after they had come. The only reason there were any cemeteries here was because some people occasionally moved from other States after disease had got such a tight hold of them that Wisconsin had not time to cure them. Milwaukee, whose privilege it was to entertain the Association this year, was the eldest and fairest daughter of Wisconsin, and it was meet that she should greet her mother's guests and act the part of hostess. But the mother herself did not want to be forgotten, and she wanted her guests to remember that there were many other daughters nearly, if not quite, as fair, who would gladly offer a warm welcome to any of those present who could or would visit them.

The Hon. P. J. Somers, Mayor of Milwaukee, then delivered the address of welcome to the city. He spoke of the greatness of the country in material matters, and held that it should be the aim of our lawmakers to make it equally a leader among the nations of the earth in everything pertaining to the health of the community and of the individual. It was the duty of commonwealths and of municipalities to hold up the hands of members of the medical profession at all times, and especially during periods of threatened invasion of epidemic disease; and any public officials that did not do so to the full extent of their powers were guilty of nothing less than treason. In closing, the speaker expressed his best wishes for the success of the meeting, and extended a cordial greeting and welcome to the Cream City of the Lakes.

Dr. Wingate, on behalf of the Committee of Arrangements, presented a silver gavel, made in the shape of a brick, to the President of the Association, with the hope that he might keep it as one of the pleasantest mementos of a long and honored life.

The President's Address.—Dr. Hunter McGuire, of Richmond, Va., then delivered the annual address. Fifty years ago Henry Clay, while crossing the Alleghanies on his way to his Western home, stopped his horse on the summit of one of the highest ranges and gazed intently down into the beautiful Virginia valley whence he had ascended. To a companion who asked him why he stopped, he replied: "I am listening to the tramp of the millions coming across these mountains to fill the villages and prairies of the West." The multitudes now living and toiling in all parts of our land bear witness to the prescience of this great statesman. Our country, though young, is yet old. The rush and activity of its people have expanded years into decades, decades into centuries, and centuries into thousands of years, so that even now our institutions, young as they really are, have all the dignity and solidity of age. America is already

among the first nations of the earth, and medical men here should do their part, and should see to it that their associations do not fall behind the other organizations of the country.

The prime object of the American Medical Association is to study the origin of disease, its nature, and its course, and to find out how best to prevent it and how to cure it when efforts at prevention have failed. But, secondarily, it is the duty of every member of the Association to aim at securing for the organization the greatest efficiency in its working. It is wrong to assume that disease and death are punishments inflicted upon man for his misdeeds. It is true that disease often does, as a Nemesis, dog the footsteps of folly and crime. Yet that it does not attack the wicked alone, and that the innocents suffer as well, we have the word of the Great Physician himself. We are all subject to the workings of organic laws and to the penalties of infraction of these laws.

Medical men must gird themselves for combat against the spread of disease, and their first fight must be with those who prevent interference with their domestic life by the sanitary authorities. The individual must learn that his house is not his castle when it exists as a menace to the health of the community, and he must be taught that the sanitary police of towns and dwellings is essential in these days, and cannot be hampered in its workings by any man's jealousy of interference in his own house when disease is present. Then, too, the profession has to overcome the apathy of the lawmaker, and must secure legislation looking to the establishment and equipment of State and local boards of health. We have already accomplished much in the way of preventing outbreaks of disease and of restricting its spread, but we have yet much to do in this direction. There is a vast field for medical research in the study of disease in the United States. Malaria is one of these diseases. We know how much can be done by drainage in suppressing it, and much has already been done where drainage is possible. But a great problem yet confronts us in the attempt to drive out malaria from the Lower Mississippi Valley, where the flat country, the bayous, and the marshes present such a fertile breeding-ground for the germs of this disease. This is a problem with which the civil engineer is chiefly concerned, but his efforts can be greatly aided by the advice and counsel of the skilled physician. The speaker urged upon his hearers the necessity of establishing medical societies in every county, city, and township, and in every community where there are enough doctors to form such associations. The organization of the American Medical Association has improved each year, and he hoped that this improvement would continue. He argued that the special work be left more and more to the Sections, so as to give more time for the transaction of necessary business in the general sessions.

The Committee on Revision of the Constitution and By-laws, which was to make a report this year, would present some new features, and had left out some which he thought might better have been retained. He was glad that the report was not to be acted upon this year. The Committee on Revision of the Code will also ask that the settlement of the question be postponed until the next meeting. The speaker had his own views of this Code matter, but he would not express them at this time. He would, however, make one suggestion, namely, that the entire subject of the revision of the Code be referred for final decision to the different State Societies in affiliation with the Association. The question was one of such importance that it ought to be settled only by a full, free, and equal vote of every man concerned. This could not be had at any meeting of this Association, for it was inevitable that wherever the meeting was held the local representation should be larger than that from a distance, and consequently the matter would be decided practically by the votes of members from a limited section of the country.

National Quarantine.—The question of national quarantine was one of great importance to every part of the Union. The people demand the passage of such laws as may render us safe against invasion by epidemic diseases such as cholera and typhus fever. The latter disease had recently crept into New York, but, thanks to the efficiency of the Board of Health in that city, had not become epidemic.

Last summer the country was threatened with an invasion of cholera, but escaped by a happy combination of circumstances rather than through the workings of a scientific quarantine system. Experience has shown that a strict quarantine will keep out contagious disease. During the Civil War all the Southern ports were closed, and none of them was visited by yellow fever, a fact, by the way, which proves conclusively that this disease is not indigenous in the Southern States, but is always brought from without. The only open port in the South at that time was Wilmington, N. C., which had practically free communication with the outside world. Here yellow fever, imported from the Bermudas, raged with great fury. It will not do to leave the matter of quarantine in the hands of municipal authorities, for local interests are always paramount and will never be allowed to be sacrificed to those of distant communities. The doctrine of States Rights must go down before the necessity of a national quarantine law. This is a question that concerns the entire Union, and not merely one city or one State. If a pestilence should sweep our country, it would cost more in life and property than war with a foreign power, and we should take measures in time to prevent it. The speaker was not in favor of a quarantine of detention, but one of prevention. The modern system of quarantine rests not upon exclusion, but upon the sound principles of maritime sanitation He referred to the quarantine at New Orleans as a model one of the kind; its efficiency is shown by the fact that yellow fever has been kept out of that city for twelve successive years, and yet the commerce of the port has not been interfered with.

He referred to the resolution, passed at a previous meeting, calling for the creation of a Department of Public Health, with a secretary having a seat in the cabinet. At the last meeting of the American Public Health Association a somewhat similar resolution had been passed. But as yet Congress had done nothing in this direction. Bills had been introduced in both houses, but had not yet reached a hearing.

In concluding, Dr. McGuire expressed his appreciation of the honor that had been conferred upon him in his election to preside over this meeting of the Association, and hoped that the members would look with indulgence upon his shortcomings.

Upon motion the Address of the President was referred to a committee for consideration of the recommendations contained in it.

Mr. Ernest Hart, editor of the *British Medical Journal*, was then introduced and made a few remarks. He said that he brought a greeting to this society from the British Medical Association, from which he came as a delegate. The proceedings of the American Association were watched with deep interest by medical men in Great Britain, and the efforts of American physicians to uphold a worthy ethical standard called forth the sympathy of their British *confrères*.

The report of the Treasurer showed a balance on hand of $5,844.78.

The Committee on Secretary of Public Health reported progress. Congress had adjourned without taking any action on the bills which had been introduced creating a department of Public Health, and the bills were still in committee. It requested that the Association continue its efforts to secure the establishment of this department of the National Government. The report also asked for the appointment of a committee of ten to wait upon President Cleveland, and request him to incorporate a recommendation to this effect in his next Annual Message to Congress. On motion the report was adopted and ordered to be printed in the journal. The chairman was also empowered to fill any vacancies in the

Committee, which it was announced contained some dead timber that had better be gotten rid of.

The Pan-American Medical Congress.—Dr. Charles A. L. Reed, Chairman, presented his final report. The organization of the Congress has now been completed in every State and Territory of the United States, and in every other country and colony in North and South America, including the West Indies and Hawaii. The President of the United States will open the Congress in person, and will receive the delegates at the White House. The titles of several hundred papers, and in most cases the abstracts of the papers as well, have already been received, so that the success of the meeting is assured. Many advance registrations have already been received, and the Committee desired to thank those who had responded thus early to their appeal, and had lightened their labors in that way. But a large sum is yet needed to meet the absolutely necessary expenses of organization, and Dr. Reed urged those who had not yet done so to send their subscription fees of $10 to the treasurer of the Congress. The Committee thanked the Association and the medical press of the country for efficient aid in promoting the success of the Congress.

Second Day, Wednesday, June 7th.

The meeting was called to order by the President.

Invitations were received from Asbury Park and from Hot Springs to hold the next meeting in their respective cities.

Address on General Medicine.—Dr. Hare delivered the address. He said that a correct diagnosis is necessary to successful treatment. In arriving at a diagnosis a microscopical examination of the blood is useful, as is also the chemical examination of the contents of the stomach in certain cases. At this day there is no excuse for dodging, and the shotgun prescription is a confession of ignorance. Improvements in diagnosis and in treatment have kept pace with each other, and although the gains have not been by leaps and bounds, yet they have been sure. The speaker discussed the subject of anæmia and its treatment. It is well known that what was useful in some forms of anæmia and not in others, but no satisfactory reason for this was put forward. It is now known that in one form of the disease there is a deficiency in the number of the red blood-corpuscles, while in another the trouble is rather in a reduction in the amount of hæmoglobin. It is in the latter form that iron is useful. In passing, the speaker protested against the frequent abuse of iron, against the giving of the drug when it is not indicated, and against the exhibition of too large doses, as there are only about thirty-nine grains of iron, all told, in the blood, and doses of ten or twelve grains a day are absurd.

Many conditions formerly regarded as diseases are now known to be only symptoms. Asthma is one of these conditions, and in every case the cause, though obscure, will always be found if sought for. Another condition which is gradually passing from the dignity of a disease to the place of a symptom is diabetes mellitus. Shock is often wrongly treated because it is not understood. Death rarely occurs in the first stage of shock, that of vagus irritation; in the second stage the whole arterial system is relaxed, and this is the most dangerous condition. Here belladonna is useful. In epilepsy we have found how the bromides act, so that now they are given scientifically instead of empirically. Quinine was formerly given empirically in malaria; now it is known that the drug kills the germ of the disease.

Among recent advances in therapeutics the speaker referred to the use of animal extracts, especially of thyroid extract in myxœdema and cretinism.

Report of the Trustees of the Journal.—The Trustees said they had had it in mind to improve the *Journal*, but had been unable to do so on account of lack of funds. The expenses of the *Journal* had been a little over twenty-four thousand dollars, and the receipts between sixteen and seventeen thousand, leaving a deficit of some $7,500. There were about five hundred subscribers, and something over four thousand copies were issued to members, but about five hundred of the latter would have to be cut off.

Report of the Committee on Revision of Constitution and By-laws.—The Committee submitted the draft of a new constitution and by-laws which it thought would, if adopted, promote the development of the Association and advance the interests which it represents. The key-note of the proposed changes, the Committee explained, was "the advancement of scientific medicine as represented in the Sections." The Executive Committee of the various Sections form collectively a Business Committee of the Association. It shall be the duty of this Committee, the new constitution provides, to seek the removal of any obstacles that interfere with the cordial co-operation in the Association of all competent, honest practitioners of rational medicine throughout this country. Further, this Committee shall make and present the nominations for officers and standing committees of the Association, and recommend the time and place of the ensuing meeting. Thus the practical government of the Association is taken away from the members by States and placed in the hands of the same members grouped as specialists. It was believed by the Revision Committee that the officers and place of meeting so obviously affect the prosperity of the Sections that it would seem wise for the latter to make the recommendations. Radical changes are also made in the conditions of membership, which is hereafter to be limited to members of the several affiliated State Medical Societies. Any man who is a member in good standing of a recognized State Society is entitled to membership in the National Association upon payment of the dues. The question of his worthiness is left absolutely to the State Society, the Association requiring only that he pay his dues. The time allotted to the general session is to be greatly reduced, while that devoted to Section work is stretched out to the greatest possible extent.

In concluding its report the Committee expressed a hope that it would be adopted, believing that the new features would provide for more satisfactory transaction of all business coming before the Association. By adopting this new constitution the society would have provided for the study of every question by experts previous to its consideration by the general body. It would thus be able to act with more tact and wisdom. Further, the adoption of the proposed constitution would promote the best interests of the Association, of its Sections, of scientific medicine, of the several State Societies, of every intelligent practitioner of medicine, and hasten the organic unity of the profession of the entire North American continent.

The report was at first signed by all the members of the Committee, namely, Drs. H. D. Holton, Leartus Connor, Daniel E. Nelson, Benjamin Lee, and H. D. Didama. The latter gentleman subsequently withdrew his name, but this did not move the other members of the Committee, who stated that they were more than ever convinced that the alterations proposed are vital to the best prosperity of the Association. They therefore commended the new constitution to the favorable consideration of the society.

Dr. Didama made a minority report. After having signed the original report he had changed his mind and now disapproved of some of the radical changes therein contained. He believed the government of the Association should rest in the hands of the delegates from the different States, and he also believed that the taking from them of the right to appoint the Nominating Committee would be unfair, unjust, and unsatisfactory.

According to the provisions of the constitution both reports will lie on the table until the next annual meeting.

The Committee on Revision of the Code then made its report. It asked for further time to make its full report, but in the meanwhile it would suggest:

1. The omission of all sections of the Code that describe the obligations of patients to their physicians and of the public to physicians. The reason for this suggestion is that the Code is not designed either for patients or the public, and so the sections are superfluous.

2. To place in the same list with the copyrighting of medical books and other similar works the patenting of all mechanical appliances used in medicine or surgery. The Code says nothing respecting the copyrighting of medical publications, and the Committee could find no good reason why it should say anything respecting the patenting of mechanical devices.

3. To define more accurately the term "consultation," since the present conditions of medical consultation differs widely from those of forty or more years ago. The Committee recommended the alteration of Article IV., Section 1, of the Code to read as follows: "A thorough medical education furnishes the only presumptive evidence of professional abilities and requirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as the good of the patient is the sole object in view, and this is often dependent upon personal confidence, no intelligent practitioner who has a license to practise from some medical board of known and acknowledged legal authority to issue such license, and who is in good moral and professional standing in the place in which he resides, should be refused consultation when it is requested by the patient."

4. To rewrite the Code in phraseology so plain as to make it a practical common-sense document for daily guidance.

5. To have the Code taught as part of the regular curriculum in medical schools.

This Committe was the same in constitution as the one on revision of the by-laws, and in this, as in the other, Dr. Didama made a minority report. He said it was no excuse to strike out part of the Code to say that it was not made for patients and the public. The public should be taught the Code so that they may know their duties. The minority report was in brief a protest against any revision of the honored Code of Ethics of the American Medical Association.

THIRD DAY, THURSDAY, JUNE 8TH.

THE session was called to order by the President at eleven o'clock.

The Address on Surgery was delivered by HENRY H. MUDD, of St. Louis, the subject which the orator chose for his address was "Surgical Problems." It is not the new that is always the most valuable in surgery, and often what is thought to be new is in reality old. The three problems which the speaker proposed to discuss were drainage, the radical cure of hernia, and appendicitis.

Drainage.—The question of drainage and drainage-tubes is one that has been discussed by leaders in surgical work for many generations, though it is only within perhaps the last twenty years that the data necessary for the solution of this problem have become in a measure definite. Since the necessity for surgical cleanliness has become a dogma we have learned that drainage is not an essential to the rapid healing of even extensive wounds. No intelligent surgeon will discard the use of drainage in the treatment of suppurating wounds. The question has been narrowed down to that of the use or abuse of drainage in aseptic operation wounds. Union by first intention may be expected in a clean, incised wound, not vitiated by applications, with hemorrhage controlled, with perfect approximation of the divided tissues, and with rest of the individual and of the injured part. But with all these conditions fulfilled, there still remain two essential factors to success, viz., a vital power in the individual sufficient to insure the establishment of initiative processes and a proper resisting power of the parts involved in the wound. The speaker did not believe that we could dispense with the drainage-tube in all the so-called clean wounds, for the above conditions cannot always be secured. The question of hæmostasis is often a serious one, as it takes time and thus prolongs the period during which the patient is under the influence of the anæsthetic. Perfect approximation of the incised tissues also consumes valuable time. Thus while healing without drainage is the ideal wound-treatment, it is not always to be desired, if it can be secured only at the expense of the patient. The danger of infecting the wound through the drainage-tube is more apparent than real, when the latter is removed at the end of from one to three days. It is not necessary to retain the tube until all secretion from the wound has ceased, for the tube is itself an irritant and will often keep up a discharge that would otherwise soon dry up. Soap, water, and heat excluded, the speaker would rather dispense with all antiseptics than with the drainage-tube in certain cases, yet the use of the latter is becoming more and more limited.

Radical Treatment of Hernia in Children.—A permanent cure of hernia is often brought about by the use of a truss, and this measure should always, when possible, be given a trial. In the case of adults, however, the conditions are different, and a radical cure by means of the truss is an improbable event. The very fact of the multiplicity of methods advocated for the radical treatment of hernia is a proof that the problem has not yet been satisfactorily solved. The mortality attending the operation is so low (about one per cent.) as to justify its undertaking. If the majority of cases are permanently cured, making all necessary deductions for ultimate relapses, it may be stated that permanent recovery ensues in from sixty to eighty per cent., a sufficient number to justify the operation. Of all the methods that of Macewen alone permits of the retention of the hernial sac, for it is generally agreed that the obliteration of the sac is essential to a perfect result. The important point in guarding against the recurrence of the hernia is the destruction of the normal irregularity in the abdominal wall formed by the transversalis fascia and the muscles at the internal abdominal ring. This can be most effectually accomplished by closure of the canal and removal of the cord to a new point for its passage through the abdominal wall. Operators differ in their choice of the opening for the cord, but the preferable point would seem to be one to the outer side of the canal near Poupart's ligament. In certain cases, however, it may be better to carry it well in toward the median line. The union of the tissues of the weakened abdominal wall should be sought by primary union rather than by granulation, as the former is stronger. The speaker preferred buried animal sutures to permanent sutures of silk or wire. The following were Dr. Mudd's conclusions: 1. The mortality should not deter us from encouraging the operation for the radical cure of hernia; 2. the percentage of recoveries is sufficient to justify it; 3. the removal of the sac is an essential feature of the operation; 4. the approximation of the tissues in the weakened abdominal wall is no less important; 5. the surgeon cannot urge the operation in every instance, but may perform it in the great majority of cases where a truss does not sufficiently control the hernia.

Appendicitis.—The treatment of this disease is still an open question, and one that is most difficult to decide, because of the difference in individual cases. The anatomical and clinical investigations of recent years have demonstrated very clearly that the American view of the pathology of inflammation in this region is correct. Primary inflammation of the appendix is frequent, and it not only produces ulceration and destruction of this portion of the bowels, together with circumscribed or diffuse peritonitis, but often also determines a perityphlitis and a typhlitis with engorgement and thickening of the walls of the ileum. The vast majority of inflammations in the right inguinal region originate in the appendix; they result not so much from concretions in the appendix as from irritative catarrhal obstructive conditions which pro-

duce engorgement of its mucous coat and thickening of its wall. The presence of irritating fluids containing the bacterium coli of fecal matter or of a foreign body may excite inflammation, as may also a disturbance of the circulation resulting from a bend or twist in the appendix, or from the pressure of a distended bowel. The inflammation caused by this disturbed circulation may disappear upon the removal of the exciting condition, and resulting congestions may be evanescent in character. An ulcer of the appendix, caused perhaps by a foreign body, may lead to perforation without giving rise to any previous symptoms of inflammation or causing much pain in the abdomen. Circumscribed peritonitis may arrest the action of the ileum and colon, and by agglutination of the parts establish a tumor with doughy or elastic outlines, suggesting an intra-peritoneal abscess. This tumor may disappear as the peritonitis subsides and peristaltic action becomes re-established, or it may cause death by rupture and escape of its contents into the peritoneal cavity. The duration of a given case cannot always be predicted from the symptoms, for a free appendix may rupture and discharge its contents into the abdominal cavity, causing death within a few hours of the first warning symptom. A severe colic and other signs of grave local trouble may attend a case which rapidly and permanently recovers. The situation of the appendix is a fact of some moment in the outcome of inflammation, for when it is behind the head or body of the colon the result is generally much less grave than when it hangs somewhat freely from the colon, and is in more intimate relation with the small intestine. The latter condition exists in about seventy per cent. of all cases, but as an offset to this it has been found that inflammation occurs less frequently in the appendix surrounded by the small intestine than it does in that which is held in close relation with the colon. There is grave danger in waiting either for the recession of the inflammation or for the development of a well-defined abscess.

Since we can never predict with certainty the result of the inflammation from the signs present in any given case yet we all know that many cases with grave symptoms recover without operation. If a definite rule for action must be outlined, then logical deduction and chemical experience will demand an operation in every case of appendicitis, or they will deny operative interference until perforation has formed and is seeking exit by an external opening. The first alternative is very often denied the surgeon, the patient preferring the chances of recovery without cutting; yet the safe operation is made only early in the course of the disease, or later when the abscess is clearly defined. The intermediate period is one of danger to the patient and of anxiety to the surgeon; we must wait for a definite solution of this difficult problem until more voluminous statistics are at hand, and these, deceptive as they are, must finally determine our line of action.

Three Factors of Success in Surgical Operations.—The fate of wounded tissue, whether the injury has been inflicted by accident or by design, depends upon three factors, namely: 1. The vital power of the individual; 2, the condition of the parts involved; and, 3, the amount and character of the bacterial infection. The appearance of antiseptic surgery was an event of vast and overshadowing importance, and surgeons fell so far under the influence of the new doctrine as to forget that other conditions entered into the determination of the results of their operations. But nature's laws are persistent and we are learning again that the vital resisting power of the individual is a factor that cannot be overlooked. This mysterious power has ever been a source of confusion as well as of strength to the surgeon. It has won his battles in spite of ill-advised surgery, and it has brought death when everything possible to avoid it has been done. The local resistance established through the action of phagocytosis at the site of the wound supplements the surgeon's efforts for antisepsis, and makes possible the grand success which has attended the enforcement of these modern methods of cleanliness. The speaker dwelt with special emphasis upon the importance of not overlooking, in our enthusiasm for antisepsis, the two other great factors, to wit: the vital power of the individual and the local resistance of the issues involved. No one can predict with absolute certainty the result of any surgical interference in the human body. The most skilful surgeon who has taken advantage of everything his knowledge and experience could suggest to make his operation a success will occasionally meet with defeat, and an operation is therefore not to be lightly undertaken, and it is only the existence of serious disease that will justify grave surgical procedures.

Address on Cholera.—Mr. Ernest Hart, of London, then read, by invitation, an address entitled "Cholera, an Exclusively Water borne Disease." This is, he said, a filthy disease caused by dirty people in dirty places and spread by dirty water. Cholera may be drunk, or it may be eaten, but it cannot be caught. It does not spread from person to person, but its diffusion occurs through the medium of food and drink. If the water supply of a locality remains uncontaminated, cholera cannot rage here. In epidemic form every cholera death is a death by poison, and the municipal authorities or water companies should be held responsible in case of epidemic, and should be proceeded against by criminal indictment or by civil action for damages.

Quarantine, maritime, or land fumigations, sprinkling with antiseptic fluids and the like are useless. Maintain the purity of the water-supply and there need be no cause for alarm as regards cholera. The safeguard against the disease is purity of air and water but especially the latter, for cholera is a water borne disease.

Officers for 1894.—The Committee on Nominations reported the following: *President*, James F. Hibbard, Richmond, Ind.; *First Vice-President*, John C. Wyeth, New York; *Second Vice President*, I. N. Love, St. Louis, Mo.; *Third Vice-President*, Thomas Murrell, Little Rock, Ark.; *Fourth Vice-President*, U. O. B. Wingate, Milwaukee; *Treasurer*, R. J. Dunglison, Philadelphia; *Secretary*, W. B. Atkinson, Philadelphia; *Assistant Secretary*, L. H. Montgomery, Chicago; *Librarian*, George W. Webster, Chicago; *Editor of Association Journal*, Dr. Culbertson, Chicago. *Trustees* to fill vacancy of those whose term expired this year: John B. Hamilton, Ill.; E. F. Ilgalls, Ill.; L. McMurtry, Louisville. *Members of Judicial Council:* J. N. Quinby, Jersey City; J. McFadden Gaston, Atlanta, Ga.; A. F. Jonas, Omaha; H. J. Murphy, St. Paul. San Francisco was proposed as the place of the next meeting in May, 1894. But this suggestion called forth a strong opposition. It was held that matters of vital importance to the Association were to be decided next year and it would be impossible to have a full representation at so remote a point.

Abnormities of Locomotion in Nervous Disease.—Paul Blocq has recently issued a little work of one hundred and fifty pages upon the variations in the gait of persons suffering from nervous disease. Difficulty of locomotion is one of the cardinal symptoms of organic or functional nervous affections. The ordinary physician recognizes two distinct types, perhaps, the paraplegic gait and the tabetic. In Blocq's interesting brochure the different varieties of the pathologic gait are described; and in a chapter on symptoms, these abnormities of locomotion are concisely classified, according to pathogenesis and clinical observation.

A Propos of the Revival of Symphyseotomy.—Segault, the father of symphyseotomy, said in a discourse published in Paris in 1778: "Without doubt time and success will avenge me; why should I be more fortunate than so many others who have had the happiness to make discoveries important to humanity? They have been persecuted during life, and posterity has worshipped at their tomb."

THE TWENTY-SECOND CONGRESS OF GERMAN SURGEONS.

Session held at Berlin, April 12, 13, 14, and 15, 1893.

(Special Report for the MEDICAL RECORD.)

This is the second time the meetings were held at Langenbeck's renowed hall. Professor König, of Göttingen, presided. The Vice-President is Czerny, of Heidelburg. The meetings were attended by Austrian, Swiss, and German surgeons.

Extirpation of Tumor of Liver.—The programme was opened by Dr. v. BERGMANN, with a paper on "Extirpation of a Tumor of the Liver," and demonstration of the patient. Ponfick, in Breslau, published accounts of operations on the substance of the liver, proving their harmlessness, some time ago, and showed that large masses of liver substance could be removed without endangering the patient's life, and a total growth of substance, as also at times connective tissue, replaced the damaged portion. In Bergmann's case it was supposed to be an echinococcus, size of a child's head, glandular tumor. The tumor, which proved to be an adenoma, was in the region of the umbilicus, extended beyond the median line, was hard, and movable. It was impossible to sew the Glisson's capsule; every vessel was seized and then ligated. The wound was kept open and tamponed with iodoform. The course was without any reaction, and the case was cured at the end of five weeks.

Non-parasitical Cysts of Liver.—Dr. W. MÜLLER, of Aachen, next reported "Non-parasitical Cysts of Liver." The speaker extirpated a cystic tumor of the liver, which, prior to the operation, appeared to be an ovarian cyst. A ligature was placed around the pedicle; good result; case healed in about four months. The tumor proved to be, microscopically, a cystic enlargement of the bile-passages (newly formed), a so-called bile-passage cystic adenoma. The literature contains but three such cases. The discussion followed in which Bardeleben, Czerny, Kuster, and König joined, the drift of which was that although the technique of operations on the liver were difficult, considering the amount of hemorrhage, there was decided room for improvement; still the prognosis here was much better, even in some malignant cases, and with the amount of hemorrhage encountered, than in a great many organs of the body.

Operative Treatment of Congenital Hip-joint Dislocations.—Dr. HOFFA, of Würzburg, next spoke on "The Operative Treatment of Congenital Hip-joint Dislocations." The speaker operated in twenty-six cases. He recommends the operation very early in life, not after the tenth year. In the discussion, Professor König, of Göttingen, and Professor Gussenbauer, of Prague, criticised the methods of the speaker; each mentioned his own method. Dr. Kinkenberg, of Halle, mentioned a specially constructed trephine for this operation.

Statistics of Anæsthesia.—Next followed the report of the "Gathered Statistics in regard to Narcosis," by Professor Swelt, of Berlin. Last year fifty-eight reports were sent in, numerous over from foreign countries. In all 57,541 narcoses are reported on, among them 11,464 with laughing-gas from the Dental Department of the Berlin University. The latter have been entirely discarded. If we add the reports of the previous years to the present we have a total of 157,815 narcoses: among which 53 deaths took place, or 1 in 2,900.

The relationship of mortality according to the anæsthetic used is about as follows: Chloroform, 1 to 2,899; chloroform and ether, 1 to 4,118; bromethyl, 1 to 4,538; pental, 1 to 199. With pure ether not a single death is reported among 14,506 narcoses, the same with the solution of ether, chloroform, and alcohol, recommended by Billroth.

The desire to extend the statistics was mentioned, yet the tendency to accept ether as an anæsthetic was strongly endorsed. Especially Professor Kuster, of Marburg, and Trendelenburg, of Bonn, lauded ether highly, whereas König and Bardeleben remained true to chloroform. The question of heart weakness by rhythmic movements externally in the region of the heart to restore animation was mentioned. The latter was endorsed by v. Bardeleben and v. Eiselsberg, of Wien.

Bow-shaped Resections of Knee-joint.—PROFESSOR HELFERICH, of Greifswald, next mentioned bow-shaped resections of knee-joint anchylosis. The speaker laid stress on the bow-shaped excision, or resection, and mentioned a bow-shaped saw as used by carpenters, and he could with this instrument saw off small particles of bone. Helferich had very good results from his method.

Dr. BIER, of Kiel, demonstrated several cases of amputation at the ankle joint. After these operations there is manifest the desire to have the stump heal so that pressure below will not irritate. For this purpose the speaker attached a piece of the tibia so that it formed a kind of foot. This can only be done in cases where a large portion of the ankle is still present.

Dr. NEUMANN, of Halle, mentioned the treatment of the myelogenic sarcoma of the long bones by resection.

Uranoplasty.—PROFESSORS KUSTER, of Marburg, and JULIUS WOLFF, of Berlin, demonstrated cases of harelip in children, in which Kuster describes a new method of uranoplasty. After the operation it was necessary to instruct the patients in articulation, and it was found that a good functional result followed. The question as to how soon cases should be operated upon was very hard to decide. At the end of the first meeting PROFESSOR CZERNY, of Heidelberg, spoke on sacral operations. The discussion was participated in by Drs. Schede and Gussenbauer.

Dr. v. HENIRICH, of Hamburg, demonstrated at the second meeting a thorokometer constructed by him.

Dr. KARZ, of Leipsic, demonstrated glass microphotographic preparations of pathological sections which were exceptionally good. After him Dr. SCHLANGE, of Berlin, spoke on solitary bone cysts, with demonstration of a patient. The discussion followed by v. Esmarch, Israel, and Sonnenberg.

Trephining for Cranial Injury.—PROFESSOR HAHN, of Berlin, next spoke on trephining the skull, with a demonstration. The patient, aged thirty-five, alcoholic, slaughterer by profession, was taken ill with eye trouble, with total blindness in one eye and weakened vision in the other, besides aural trouble with decided deafness, and weakness of smell, later weakened memory, and a constant dull headache. The diagnosis of cysticercus of the brain was made. On chiselling the frontal bone the dura mater appeared very much distended. On incising it a portion of the brain prolapsed, and as it could not be replaced was removed. Very soon after another cerebral prolapse took place. The operator now suspected pressure in the subdural space, and on puncturing withdrew 100 c.c. of a serous fluid; it was quite easy to push the cerebrum back into its place. The patient was entirely cured, with exception of blindness in one eye. The speaker believed that it was not a case of cysticercus, but rather one of chronic hydrocephalus in one of those alcoholic subjects.

Further contributions were by Dr. NICOLAI, Surgeon-in-Chief at Frankfort-on-the Oder. Here a soldier was wounded by a manure fork in the left temple; he became unconscious. The wound was laid bare, and enlarged with a chisel. The wound healed, after which a paralysis of right side and considerable weakness of memory remained. It was impossible to write or read. The paralysis disappeared in the reverse way in which it appeared, *i.e.*, first on the leg, then the arm, lastly, on the face. The wound was again opened, owing to considerable neuralgic pians, after which healing was complete without interruption.

Dr. STENZEL, of Kustrin, gave a further contribution on this subject, a case of trepanation (hemorrhage after basal fracture).

Transplanting Skin-flaps.—Next followed PROFESSOR

Fedor Krause, of Altona, on transplanting of skin-flaps. The method of transplanting thus far on varicose ulcers of and around the ankle consisted in taking a flap from behind the ankle on the sound side and placing it over the affected side with a splint. This required a perfect apposition of the affected parts for several weeks.

Krause has transplanted from the forearm in all on twenty-one cases, with very successful results.

He takes a spindle-shaped piece of skin from the forearm, which, allowing for the subsequent contraction, will be larger than the defect. The piece of skin is carefully applied over the newly pared (scarified) and pressed firmly against the wound by means of carefully disinfected pledgets of cotton, the serum oozing by this pressure acts for adhesive purpose, and healing takes place without reaction. Further remarks on this subject were made by Korte, of Berlin, Hirschberg, of Frankfort-on-the-Main, Louenstein, of Hamburg. After a few minor remarks, Dr. Schulze-berge mentioned a case of trigeminus neuralgia cured by stretching the nervus facialis. In the discussion which followed, in which v. Esmarch, of Kiel, spoke, he wished to know if the result was an ideal and lasting one. He further pointed out the benefit derived by ricinus-oil in cases of this kind. The close of this session was a paper by Dr. Korte, of Berlin, on choledochotomie. In the discussion Professor Riedel, of Jena, was the chief speaker.

The third session commenced with a demonstration of an apparatus for the treatment of contracted (shortening) joints, by Krukenberg, Halle-on-the-Saale. Dr. Barth, of Marburg, and Kurnel, of Hamburg, mentioned resection of kidney. Schede, of Hamburg, proved the usefulness of deep seated sutures in laparotomies by showing various preparations in which perfect healing took place by the use of silver sutures. Dr. Haasler, of Halle, spoke on resection of the intestine.

Defective Trachea after Diphtheria.—Dr. Schimmelbusch, of Berlin, demonstrated two cases of defective trachea. In severe diphtheria after tracheotomy there exists either through the diphtheritic process or by means of pressure, a loss of substance on the tracheal rings which may lead to difficulty in speaking.

In the first patient, nine years of age, female, there was a piece of trachea, four centimetres in length, wanting. In spite of several plastic operations there still remained a defect of the air-passage the size of a silver quarter of a dollar. The child discovered a remedy for its own relief. When the child bends its head forward it is able to intonate loudly, because the defect closes.

In the second case, thirteen years of age, female, the defect was much larger than in previous case. Here a piece of the periosteal p ate of bone from the sternum was attached around the defective portion, and although not regarded with much hope gave a surprisingly good result. The patient lost voice from her third year, *i.e.*, for ten years, but now speaks again, although in a harsher voice than normal; the plates secured the parts, excluding air.

Dr. V. Eiselsberg, of Vienna, next mentioned the results of total extirpation of the thyroid gland of sheep. He found that young subjects with total extirpation resulted in cretinismus. The operated sheep differed from the control sheep in hindrance of growth and in a physical depression.

The speaker emphasized the fact that cachexia strumapriva, myxœdema, and cretinismus were founded on the same basis. The same speaker discussed strumous metastasis.

Wound Diphtheria —Dr. Brunner, of Zurich, next spoke on wound diphtheria, and tried to show that the real cause of the affection lies in the presence of Löffler's bacillus causing this infectious disease.

Professor Neuber, of Kiel, spoke on "Asepsis and Artificial Bloodlessness." He mentioned in place of Esmarch's well-known rubber bandages the application of wet linen bandages, mentioning the fact that in war a supply of rubber is not always at hand, whereas a wet linen bandage can always be procured and gives the same result by pressure as rubber, *i.e.*, bloodlessness of the part.

Professor v. Bardeleben, of Berlin, mentioned the deserved praises of Esmarch, and stated that the tourniquet could easily transplant the rubber bandage of Esmarch. Dr. Meisner next spoke.

Dr. Schede demonstrated some specimens of hip-joint resections.

Abdominal Gunshot Wounds. — Next followed a paper by Professor v. Braman, of Halle-on-the-Saale on the treatment of abdominal gunshot wounds. The speaker mentioned the fact that it was customary to wait until surgical interference was directly called for, and that an operation was only decided upon when functional disturbance existed, or severe injury to the intestine. Twenty-four hours is about the longest limit, after which time the chances of saving the patient by the operation were very slim. It is, therefore, very proper to perform laparotomy in urgent cases as soon as possible. Rather an unnecessary laparotomy than one too late or none at all. The speaker has had decidedly successful results by laparotomy, examination of the tract of the injury, and careful attention to same.

Bone-filling of Cavities.—Professor Sonnenburg, of Berlin, demonstrated some interesting specimens of bone-filling. To fill large cavities in bone, after operations, has been recently tried by plaster of Paris. One point against the remedy is that it displays no disinfecting properties on its surroundings. In this way there exists an opportunity for colonies of bacteria to lodge between the bone and its filling (plaster of Paris), and in this way prevent healing together of both. To prevent this the speaker followed the method of dentists and constructed a thoroughly disinfecting filling consisting of cement and copper amalgam. The first trials were made on dogs, and the specimens presented show a very perfect result; he recently experimented in same manner on human beings and will report later.

Skin Transplantation.—Professor v. Braman demonstrated cases of healing with loss of large flaps of skin and muscular tissue; the injuries consisted of burns and scalds, accidents by being run over, and otherwise without skin-flaps (plastic). No other method could have been pursued but amputation.

The speaker took skin flaps in injuries to the hand from the breast, and in accidents to the feet from the healthy ankle. The skin flaps are applied with careful allowances for nourishment by means of firm pressure and antisepsis. After healing the whole skin-flaps are to be carefully trimmed.

Disinfection of Wounds.—The last session of the Congress was opened by Dr. Schimmelbusch, of Berlin, with a paper on "Disinfection of Wounds." The influence of pathogenic germs was carefully studied on wound surfaces to see if they could be entirely destroyed. Experiments on animals were conducted at v. Bergmann's clinic, in which cultures of anthrax streptococci and others were laid on open wounds. Soon after a careful disinfection of the wounds took place. The disinfection was carried on with all known antiseptic remedies, and by all ordinary concentrations, with aid of mechanical friction. In spite of this it was impossible to prevent the infection of the animal with anthrax. This proves the rapidity with which micro organisms are taken up into the circulation, allowing a general infection, so that an almost immediate thorough disinfection proves useless in reaching all micro-organisms. The same method was pursued with mice, in which anthrax was used with the same result. If the tail were not amputated within ten minutes the animals invariably died of anthrax.

The *finale* of the Congress were papers by Professor v. Braman, on "Emphysema of Lung;" Gleich, of Vienna, "Treatment of Flat-foot;" Julius Wolff, on "Osteoplastic Operations;" Barth, of Marburg, "The Histological Results of Examinations after Bone-implantations;" Schlange, of Berlin, on "Fistulæ;" Bork, of Rostock, on "Hernia Obturatoria;" Korte, of Berlin, "Gall-stone Ileus;" Katowitz, a "New Trepanning Saw;" Kohler, of Berlin, a "Simultaneous Resection

of the Hip- and Knee-joints:" Wohlgemuth, of Berlin, a "New Tracheotomy Cannula."

The latter end of the Congress was so overrun with papers that it would be difficult to do more than give their titles, for a review of the same was almost impossible.

Professor v. Esmarch, of Kiel, was chosen President of the next Congress.

AMERICAN SURGICAL ASSOCIATION.

Annual Meeting, held at Buffalo, N. Y., May 30, 31, and June, 1, 1893.

NICHOLAS SENN, M.D., PRESIDENT, IN THE CHAIR.

DR. M. D. MANN, of Buffalo, delivered the Address of Welcome.

A New Method of Direct Fixation of Fragments in Compound and Ununited Fractures.—The President's Address was next delivered by DR. N. SENN. The speaker said that while the adoption of rigid antiseptic precautions has reduced the mortality in the treatment of compound fracture from fifty to seventy per cent. to almost nothing, yet the mechanical treatment of compound and ununited fracture has undergone little improvement during the last decade. The principal object of the address was to make an earnest plea in favor of more frequent recourse to direct means of fixation in the treatment of compound and ununited fracture. The time is at hand when compound fracture should be treated upon the same principle as wounds of the soft parts, viz., the bringing into apposition and holding in contact by direct mechanical measures the different anatomical constituents of the wound until the process of repair is completed. In oblique fractures of the femur it is generally conceded that continued extension and external fixation do not succeed in preventing more or less shortening and angular deformity. Long-continued extension is followed by temporary, and often by permanent, injury to the adjacent joints. Overriding of the fragments is often productive of harmful pressure upon important vessels and nerves. Displacement of the fragments and imperfect mobilization are the most important factors in the production of exuberant callus which so often impair the functional result. The displacement of detached fragments in comminuted compound fracture is often not recognized, and much less frequently connected without direct intervention; thorough disinfection is frequently out of the question without enlarging the external wound and free exposure of the fracture. Long confinement to bed is detrimental to the general health, and often the indirect cause of many fatal intercurrent affections. These evils attending treatment of compound fracture can be avoided in a measure by direct fixation of the fragments. This enables the surgeon to bring the fragments into accurate apposition and secure permanent retention, and it also enables him to disinfect every part of the wound and to arrest hemorrhage.

The history of directed immobilization of fragments was then reviewed. The different methods of suturing was then considered. The use of ivory cylinders and clamps was described.

The absorption of aseptic ivory and bone in the living tissues was then taken up. Investigation has shown that there is a limit to the absorption of aseptic absorbable bodies. The introduction of large and solid foreign substances overtaxes the absorptive capacity of the tissues, and either removal by operative treatment becomes necessary, or spontaneous elimination is sure to take place sooner or later. To overcome this objection the author recommended, as absorbable, intra-osseous splints—hollow, perforated cylinders of bone. The use of such cylinders does not interfere with the early formation of the intermediate callus from the medullary tissue. Such cylinders should be made of the shaft of the long bones of young animals, such as chickens, turkeys, or rabbits. Experiments and observation prove that bone or ivory used in the direct fixation of a fracture can be safely left in the tissues with the expectation that the material will become encysted and remain harmless, and that in the course of time it will be removed by absorption. Bone is absorbed more readily and in a shorter time than ivory. A hollow cylinder of bone inserted into the medullary cavity of a bone is removed completely by absorption in a comparatively short time. The same fate awaits a thin ring of bone embracing and holding in mutual uninterrupted contact two or more fragments in the treatment of compound and ununited fractures by direct fixation.

The most efficient way to prevent lateral and longitudinal displacement in oblique fractures of the shafts of the long bones is to bring the fractured surfaces in accurate contact and hold them in this position by an efficient absorbable circular support. The use of silver wire and other unabsorbable material for this purpose is objectionable. Catgut and other absorbable ligatures are not sufficiently durable. It had occurred to the author that such fractures could be retained almost to perfection after reduction by engaging the ends of the fragments in a ferrule or ring of bone or ivory. This will prevent overriding and undue shortening. Angular deformity and rotation can be prevented by appropriate external support. The results which have attended this method have been exceedingly satisfactory.

The method of preparation of the bone ferrule was described, and a number of the ferrules of different sizes exhibited. Three cases were reported in which the method had been employed. Case I. was an ununited fracture of the femur; direct fixation of fragments; union with fragments in good position. Case II. was an ununited fracture of the humerus resulting from extensive loss of bone; paralysis of musculo-spiral nerve; direct fixation of fragments by artificial impaction and bone ferrule, aided by catgut sutures; secondary nerve section. Case III. was one of compound comminuted fracture of leg; fixation of tibia with bone ferrule; fenestrated plaster-of-Paris splint; suppuration; efforts at repair.

The speaker then detailed his experimental work with the bone ferrules.

Conclusions.—1. Direct fixation of the fragments is indicated in all compound fractures in which perfect retention cannot be secured by simpler measures, and in the treatment of ununited fractures requiring operative interference.

2. This method is also justifiable in the treatment of certain forms of subcutaneous fractures in which reduction and retention cannot be accomplished without it.

3. Free exposure of the fragments in compound fractures secures the most favorable condition for thorough disinfection.

4. Perfect reduction and direct fixation of the fragments are the most reliable prophylactic measures against delayed and non-union and deformity.

5. A compound fracture should be regarded in the same light as an injury of soft tissues, and should be treated upon the same principles, viz., accurate coaptation of the different anatomical structures and perfect retention by direct means of fixation, aided by an efficient external support.

6. Bone suture, metallic, bone, and ivory nails do not furnish the necessary degree of support and immobilization in the direct treatment of fractures characterized by a strong tendency to displacement.

7. The solid intra-osseous splint of ivory or bone, as advised by Heine, Langenbeck, and Bircher, is objectionable, because it interferes with the ideal production of the intermediate callus and its spontaneous removal is beyond the absorptive capacity of the tissues.

8. The hollow, perforated ivory or bone cylinder, devised by the author, answers the same mechanical purpose without the objections which have been charged against the solid cylinder.

9. The safest and most efficient means of direct fixation of oblique fractures is by a bone ferrule, which must be applied in such a manner that it surrounds both fragments.

10. Such a circular, absorbable, direct splint prevents to perfection lateral and longitudinal displacement.

11. Rotation of the limb below, and angularity at the seat of fracture, must be prevented by a carefully applied circular plaster-of-Paris splint.

12. For fractures not requiring drainage the entire wound should be closed by buried and superficial sutures, as the bone ferrule is removed by absorption.

13. In suppurating wounds the bone ferrule should not be removed until direct fixation has become superfluous by the formation of a sufficiently firm union between the fragments.

14. The external splint should be applied in such a manner that it does not require a change throughout the entire treatment, permitting at the same time access to the wound should this become necessary.

15. Direct fixation of a fracture, combined with perfect immobilization, brings the different anatomic structures of the broken bone permanently into their former normal relations, preparing the way for the early initiation and speedy consummation of an ideal process of repair and the realization of a perfect functional result.

16. Should further experience demonstrate that bone is not sufficiently absorbable, the same kind of ferrules can be made of partially decalcified bone or chromicized catgut.

Dr. Roswell Park, of Buffalo, said that in discussing the paper he was under the disadvantage of not having seen the author's conclusions. He thought the method might be practised with advantage where there is much displacement and difficulty in maintaining the fragments in position. In two or three cases he had used Volkmann's method of dove-tailing the fragments together with advantage. In some cases he had used chromicized catgut or silkworm-gut with good results. He had not used ivory except in the form of small pegs. In suturing the fragments through holes drilled through the bone it is often difficult to bring the lower end of the suture around and tie it. It is easier to pass the suture around the bone by means of a modified aneurismal needle. It seemed to him that the application of the ferrule of Dr. Senn would require considerable disturbance of the soft parts, and might give rise to local necrosis.

Dr. F. S. Dennis, of New York, said that in the consideration of the management of compound fracture and ununited fracture we can eliminate entirely the question of sepsis. The surgeon can employ any of the methods suggested without the fear of septic complications. The method suggested by Dr. Senn is without doubt excellent in every way, but we can probably arrive at some simpler method of treating ununited fractures. He had been in the habit of resorting to drilling of the bone, and always with success. In some cases small ivory pegs have been driven into the drill-holes. Another method to which sufficient attention has not been given is that of tenotomy. This at once relieves the muscular spasm and gives comfort to the patient. There is then no muscle to contract and disturb the fragments. If physiological rest is thus secured, there is less liability to non-union. In simple fractures it is not a bad rule to divide the tendons at once.

There is no question in regard to the development of malignant disease in ununited fracture. The speaker had seen some fifty cases of sarcoma develop as the result of traumatism in bone, and these have usually been cases where there has been some movement in the fragments. Epithelioma has also been seen in cases where there has been a sinus running down to loose bone.

The amount of disturbance of the parts seems to be an objection to the use of the ferrule, but this might be obviated by dividing the ferrule into two parts and securing them together after application.

Dr. D. Forest Willard, of Philadelphia, remarked that at the Presbyterian Hospital of Philadelphia, Dr. Allis and himself had been using methods of direct fixation where there is great tendency to displacement. In order to facilitate the application of sutures he had had made drills with an opening extending through the drill, and through this the suture could be readily passed. This saves much time. He had seen a number of cases of Gluck's ivory insertions, but in every case, with one exception, the ivory plug had been discharged or was in process of discharge. The exception was a case where the ivory plug had been passed into a metacarpal bone.

The method of dove-tailing referred to by Dr. Park is valuable. The fragments may be held together by the use of screws. Dr. Allis uses steel screws for this purpose, which can be removed later if necessary.

The use of plaster-of-Paris dressing is one of the most important elements in the treatment of compound fractures. To hold the parts at absolute rest there is nothing equal to plaster-of-Paris. There seems to be something besides the absorptive power of the plaster which lessens the tendency to decomposition.

Dr. L. McLane Tiffany, of Baltimore, did not see how the ferrules could be used with advantage in comminuted fracture. The application of the ferrule in these cases is liable to cause separation of some fragments which might otherwise unite. In the three cases reported the ferrules seemed to be used simply as an adjunct to other methods. There is no method applicable to all cases, and often the method cannot be decided upon until the fragments are exposed. In cases where there has been much loss of bone, the use of the ferrule does not seem applicable. In such cases the steel splint with steel screws had been in his hands the only method of holding together the fragments. In compound comminuted fracture the fragments must be placed in position with the finger and held in place by the plaster-of-Paris bandage. It did not seem to him that a case had been made out, except that in certain instances the method described is a good adjuvant, but that it is so in many cases he should be inclined to doubt.

Dr. M. H. Richardson, of Boston, said that in most cases of ununited fracture treated by the application of silver wire recovery follows satisfactorily. He thought that the same is true from the use of ivory pegs. Occasionally, as Dr. Senn advised, the application of the ferrule is of service and is a rational method. He reported a case of transverse fracture of the humerus operated on several times by silver-wire sutures, but without securing union. In such cases where it is desirable to keep the bones from slipping transversely the method of Dr. Senn will answer a useful purpose. In ununited fracture with extensive loss of substance the periosteum and medullary cavity do not come in contact, and I do not see how this is provided for by the method described.

Dr. J. Collins Warren, of Boston, had also operated on the case referred to by Dr. Richardson, but the lack of union was due more to the condition of nutrition than to failure of mechanical appliances. The patient is five feet eight inches in height, and weighs three hundred pounds. At the suggestion of Dr. J. J. Putnam the patient had recently been put on the use of thyroid juice. During three weeks' treatment the patient had lost ten pounds, but the method had not been continued sufficiently long to determine what the ultimate result will be.

Dr. Jos. Ransohoff, of Cincinnati, asked if Dr. Senn intended the use of the method he had described to do away with the use of external appliances?

Dr. N. Senn, of Chicago, said that his remarks had been misunderstood. He did not protest against the use of external support nor did he charge this with the production of permanent damage. He had alluded to continuous extension for six or eight weeks as being productive of such results. There is no method of direct fixation, and probably never will be, that will render external mechanical support unnecessary. All that he wished to overcome was the tendency to lateral displacement, and to bring by such direct means similar anatomical structures into mutual contact and hold them there. The angular deformity and rotation can be overcome by the use of plaster-of-Paris bandage.

Hypertrophies and Degenerations of Cicatrices and Cicatricial Tissues, by Dr. J. Collins Warren, of Boston. The evolution of cicatricial tissue was first traced. Lymphatics are not usually found and nerves are rarely seen in scars. Scars rarely disappear entirely. They usually remain as a fine white line, or if the scar has stretched, as a band. Scars grow in proportion to the rest of the body. This point is not sufficiently borne in mind when performing operations on children in exposed portions of the body.

The most striking peculiarity of scar-tissue is its tendency to contract. During the healing process this acts in a beneficial way. It is also the cause of the most marked deformities. This contraction of cicatricial tissue is not due to any specific contractile quality in the tissue itself, but to the absorption of new-formed tissue. Scars are not ordinarily painful, but may become the source of pain by adherence to structures which are sensitive.

Among the most common pathological conditions observed in scars is that hypertrophic condition known as keloid. There has, of late years, been a growing feeling that keloid tumors spring from cicatrices more frequently than has been supposed. True, keloid is found on the chest and is an extremely rare form of growth. It seldom disappears. False keloid may develop in almost any part of the body.

Cancer not infrequently forms in cicatrices, usually after the cicatrix has existed several years. Calcareous degeneration of a cicatrix has been reported. A common form of complication in the life history of scars is suppuration, which may be due to reinfection or to the awakening of spores which have long been dormant. A most common form of relapse is due to tuberculosis.

A description of the cicatrix which forms between the Tiersch grafts and the subjacent tissue was given.

Every effort should be made to limit the development of scar-tissue. Animal sutures should be used if they are to be buried. Very superficial sutures should be used freely. The checking of the superabundant growth of granulations has been strongly recommended, as the contractility of the cicatrix is largely dependent upon the amount of granulation-tissue which becomes organized. For projecting scars compression has been recommended. This will often relieve the redness as well as the elevation. Unna advises friction with sand in the treatment of depressed scars. Pigmentation of scar from gunpowder may be relieved by scrubbing with nail-brush under ether. In older cases the particles of powder may be removed by the punch devised by S. J. Mixter for this purpose.

The treatment of true keloid is discouraging on account of the persistence with which it returns. If excision is attempted, the incision should extend one or two centimetres beyond the limits of the disease and to the muscular aponeurosis. Compression is recommended by many writers for the treatment of false keloid. As keloid is a connective-tissue structure, it is possible that an inoculation with the virus of erysipelas might produce absorption: whether such a powerful remedy would be justifiable is doubtful. Tiersch-grafting may be employed with advantage to broad and flat cicatricial keloids. A case was reported in which this method had been employed, and thus far (several months) there had been no return of the tumor.

Dr. George R. Fowler, of Brooklyn, described the pathological anatomy of cicatricial and spontaneous keloid. The fact that keloid more frequently follows wounds in which there has been much suppuration suggests a microbic origin. In regard to epithelioma developing in cicatrices, it was noted that it has a tendency to spread upon the surface and rarely passes into the depths of the tissues. In the treatment of this condition there should be early and radical extirpation.

Dr. L. McLane Tiffany, of Baltimore, said that in the Southern States keloid was exceedingly common, but he knew of it only as a cicatricial disease. He had never seen a case of so-called non-cicatricial keloid. In the negro the disease is prone to undergo retrogressive changes after the age of forty or forty-five years. The affection rarely occurs before the age of eight or ten years. In the white race it may be confidently expected that keloid will go away or not much progress after the age of twenty-five years. The case of a girl who at the age of seven years was severely burned on the face, breast, and arm, was reported. She was seen by the speaker eighteen months after the accident. At this time the scar was bright scarlet and one-half inch in thickness, resembling a heavy plate of cartilage; the advice was to let it alone. Twelve years later there was a white perfectly mobile scar. The speaker was inclined to think that operative measures in young persons, either white or colored, are unwise.

Dr. M. H. Richardson, of Boston, remarked that in cases of abdominal incisions it was important to bring the parts together so as to secure union by first intention. In open wounds that heal by granulation, there is a great tendency to hernia.

Dr. J. Collins Warren, in closing the discussion, said that the point which had impressed him was the absence of contractility in the scar-tissue which formerly was believed to exist. It is absorption that produces the pulling. The scar-tissue itself yields before pressure. Therefore the importance of accurate coaptation, not only to make the scar small, but to have no scar at all, and have regeneration instead of repair.

The Present Position of the Surgery of the Prostate was the first paper, by Dr. J. William White, of Philadelphia. In regard to the nature of the prostatic enlargement, it was held that the prostate gland was a part of the sexual apparatus and not chiefly an accessory organ of micturition, and that the growth or growths which make up the enlargement are analogous to the fibro-myomata so frequently found in the uterus.

The changes in the bladder are due to the mechanical obstruction, the circulatory disturbance produced by pressure on the prostatic veins, and to septic infection.

The symptoms of prostatic enlargement were discussed at length. In regard to treatment, purely expectant treatment is proper only where the enlargement has produced no symptoms and catheterization is easy and shows no residual urine. Ergot is the only drug that offers any prospect of usefulness, but it is far from demonstrated that it has any distinct effect. Palliative treatment, consisting in the systematic use of steel sounds for dilatation and the employment of the catheter, is of great value in a large number of cases.

The following operative measures were discussed: 1. Overstretching of the prostatic urethra. This is not likely to be followed by good results in cases where the median lobe and the vesical neck are chiefly involved. In lateral hypertrophy, where the urethra is simply narrowed, it may be of use. 2. Perineal prostatotomy should be regarded as that of choice in cases in which, with marked diminution of the expulsive force and with cystitis, there are evidences of wide-spread degenerative disease or of distinct renal disease, toxæmia, and general feebleness. 3. Perineal prostatectomy, where the growth can be reached by the finger and is of small size or pedunculated; perineal prostatotomy can always be converted into a prostatectomy. 4. Supra-pubic prostatectomy is the operation to be preferred in those cases in which, palliative treatment having failed, there are unmistakable indications that the local conditions are growing worse, the general health remaining unaffected.

In conclusion, the speaker said that some time ago the thought occurred to him that possibly, if the analogy between uterine fibro-myomata and prostatic growth was a real one, castration might have the same effect upon the latter that oöphorectomy does upon the former. At that time he had not read of the alleged prostatic hypertrophy in eunuchs, geldings, etc. He instituted a series of experiments on dogs to determine the effect of castration on the size of the prostate. It was found that the average weight of the prostate in dogs was 35.3 grammes. The dogs were killed at varying intervals after the operation,

the lowest period being seventy-two days, and in all there was a marked diminution in the weight of the prostate, the gland varying in weight from 2.5 grammes to 5.5 grammes, according to the weight of the animal and the period at which it was killed.

The author did not wish to be understood as advocating the measures which these studies would indicate. He simply presented the subject as a line of thought which had occupied his mind at odd times in order to have the criticism of the Association. As regards the employment of castration as a therapeutic measure in prostatic hypertrophy, the final answer must be left with the patient. If the time comes when we can promise equivalent results to those obtained by oöphorectomy in uterine fibroids, there will probably be no lack of cases willing to submit to the operation.

The Importance to the Surgeon of the Bacillus Coli Communis, by Dr. Roswell Park, of Buffalo. The literature relating to the colon bacillus was thoroughly reviewed and evidence presented showing that this organism, which is constantly present in the intestinal canal, is not always a harmless inhabitant, but becomes at times an active invader, and does not confine itself to the intestinal mucosa, where it may set up most active desquamative lesions, but may pass this barrier and penetrate into the general circulation, and exercise pernicious activity in numerous other organs and toxic effects upon the system at large.

Herniary cholera, so called, is due to intoxication from the products furnished by the organism in a virulent condition. From the intestinal canal the colon bacillus may ascend along the biliary passages, determining lesions in the gall-bladder or liver. It is known to be one of the frequent factors in peritonitis of intestinal origin. In the kidneys as well as in the bladder the colon bacillus may exert pathogenic and pyogenic properties. The organism may be introduced from without, as upon a catheter, or may be transferred from its normal habitat by some traumatism of the natural channels. The endocardium, the meninges, the pleura, articular serous membranes, and the lungs are at times not exempt from the manifestation of its activity. It is probable that there is a form of post-operative septicæmia due in no direct way to the operator or operation, but is in fact what it has often been called an entero-sepsis, and due to the migration from the intestinal canal of the colon bacillus. Constant attention to the intestinal canal should therefore be the watchword of the surgeon, both before and after operation.

The author reported six cases from his own practice in which the colon bacillus was found, and in some instances it was the only organism present. The cases were as follows: 1, Cancer of intestine with abscess; 2, recurrent peri-appendical abscess; 3, acute abscess of the liver; 4, gangrenous appendicitis; 5, acute appendicitis, with perforation and obstruction of the bowels; 6, cholecystitis suppurativa.

When Shall We Remove the Vermiform Appendix? by James M. Barton, A.M. Surgeons still differ on this subject; generally, I think, they are removing the appendix less frequently than they did, though some still remove it in nearly all cases, and one, whose article has recently been widely copied, considers all operations insufficient in which the appendix is not removed.

As I have been much less fortunate in those cases where I have removed the appendix than when I have permitted it to remain, I do so less and less frequently, so that now, in those cases where there is a circumscribed abscess, with no general peritonitis and no symptoms of intestinal obstruction, I do not search for nor remove the appendix.

During the last year I kept a record of the cases that came under my observation, and find that in nine cases of abscess of the vermiform appendix, which were operated upon and where the appendix was not removed, all recovered.

The object of removing the appendix, as I understand it, is to get rid of an inflamed, ulcerated mass, filled with pus-producing micro-organisms, the source of local suppuration and of possible general septic peritonitis. Its base is ligated to prevent fecal matters getting into the wound, and to avoid the possibility of a stercoraceous fistule remaining after recovery.

In the class of cases that I speak of, where the appendix has already ruptured and a localized abscess has occurred (and this is the condition found in most of the cases on which we operate), portions of the appendix have already become necrosed, the sloughs have separated and will be discharged with the pus. The leucocytes have destroyed the germs in the remains of the appendix, which lies buried in the inflammatory deposits surrounding the abscess.

There is but little danger of fecal matters making their exit through the appendix, as the opening of the appendix into the bowel has long been firmly closed, closed as firmly as a ligature would close it. If it were not so, the pus would never have broken through the walls of the appendix, or having broken through the resulting abscess, would not have increased in size, but would have emptied itself through the appendix into the bowel. In none of the nine cases quoted has any fecal fistule remained.

As further evidence of the strength of the obstruction at the opening of the appendix into the bowel, I may mention two cases that recently came under my observation, where fecal fistula followed natural cures. In both cases, the natural opening at the appendix was found firmly closed and the fistulous openings, when followed, were found to enter the bowel some inches away from the appendix, the pus having broken through the healthy portion of the colon in preference, showing that the inflammatory obstruction was stronger than the healthy intestine.

By not searching for the appendix, the time of the operation is much lessened, the shock is less, and the bleeding less, the granulation tissue bleeds quite freely when torn by the finger searching for the appendix. The drainage tubes and gauze keep their place better when the walls of the abscess cavity are unbroken. When they are broken it is difficult to keep the drains in contact with the ligated stump, and I regard the loss of a patient, on the fifth day, on whom I recently operated, as due to this cause.

The two most fatal complications after operation are septic peritonitis and intestinal obstruction. There is, of course, much less danger of general septic peritonitis if the adhesions be not broken down, as the pus can be much more readily kept away from the general peritoneal cavity.

Intestinal obstruction, in appendicitis, is an accidental complication caused by the manner in which the intestines surrounding the abscess are glued together, and bears no relation to the size of the abscess, and but little to the extent of the inflammatory deposits surrounding it.

In operating upon a case in which there are evidences of obstruction, if the obstructing portion of the bowel could be identified, it should be liberated. If it cannot be identified, then, after the abscess is emptied and its cavity disinfected, all adhesions should be separated, with the hope that when they are reunited, as reunite they must, they would do so in such a manner that the calibre of the intestine should be unobstructed. Under these circumstances the appendix should be removed.

If there were no symptoms of obstruction before the operation, if we separate the adhesions in the search for the appendix, when the adhesions reunite they may do so in such a manner as to cause complete obstruction; this was the cause of death in a patient on whom I operated last September for Dr. Chandler, of Centreville, Del. The original article then gives a brief history of each of the cases of circumscribed abscess on which Dr. Barton has operated during the year without removing the appendix. They all recovered and in none was there any fistule remaining.

The writer then gives a description of one of the operations performed November 29, 1892, from which we quote: "The abdomen was opened by the usual incision,

the movable intestines being carefully held back by aseptic gauze. The location of the abscess was found and the site of the intended opening was entirely surrounded by gauze, completely barring off the general peritoneal cavity; the abscess was then opened by tearing through the adhesions with a grooved director. Two and a half ounces of pus was removed, as well as a foreign body that looks like a date-stone.

"The appendix was not seen, nor was it searched for. Three or four of the upper layers of gauze, which were slightly pus-stained, were removed and the rest allowed to remain. Two large drainage-tubes were placed with their ends in the abscess cavity and the wound closed over the gauze, leaving only the ends of the drainage-tubes protruding. Three days later the stitch next the drainage-tube was cut and the gauze drawn through a very small portion of the wound. It was in three strips, together measuring five feet long by four inches wide. The other stitches were not removed until the eighth day, in order to avoid a hernia. The patient made an uninterrupted recovery, the abscess cavity healing rapidly and completely, leaving no fistule and no hernia." This patient was examined May 20, 1893. There was no hernia, no fistule, no tenderness, and no deposit to be felt in the right iliac fossa, and her general health was excellent.

In summing up the following conclusions are reached:

1. An unruptured appendix, distended and discolored, should be removed.

2. When rupture of the appendix into the general peritoneal cavity has occurred, the appendix should be removed and the abdomen flushed.

3. When a localized abscess that has existed for some days or weeks has ruptured into the general peritoneal cavity, the appendix should be removed and the abdomen flushed.

4. When adhesions have formed to the abdominal wall, open the abscess and drain, being careful not to break the adhesions that separate the abscess cavity from the general peritoneal cavity. The appendix should not be searched for nor removed.

5. When symptoms of obstruction are present empty the abscess, with the general peritoneal cavity well protected with gauze, disinfect the abscess cavity, then examine for the adhesion causing the obstruction, and if able to identify it separate that adhesion only. If it cannot be identified, then separate all adhesions and remove the appendix.

6. When abscess has formed and there is no general peritonitis or symptoms of obstruction open the abdomen, protect the general peritoneal cavity with gauze, then open the abscess and drain, do not search for nor remove the appendix.

The following papers were read by title: "Cystic Growth within the Internal Condyle of the Femur," by Dr. Thomas G. Morton and Dr. William Hunt; "Gunshot Wounds of the Intestines," Report of thirteen cases, by Dr. Albert D. Miles, of New Orleans; "Dislocation Injuries of the Semilunar Cartilage," by Dr. S. J. Mixter of Boston and "Report of Cases of Anthrax," by Dr. H. L. Burrell, of Boston; "Lymphangitis accompanied with Blood-poisoning and followed by Multiple Abscess," by Dr. J. McFadden Gaston, of New Orleans; "Clinical and Medico-legal Observations in Certain Forms of Spinal Injury" by Dr. Perry H. Millard, of St. Paul: "A Series of Operations on the Elbow," by Dr. J. S. Wight, of Brooklyn.

The Association then adjourned to meet in Washington the first Tuesday of May, 1894.

A Home for Consumptives.—Baron Nathaniel Rothschild has signified his intention of placing at the disposal of a Vienna society, which is concerning itself with the care of consumptives, his château and grounds at Semmering in the Styrian Alps. The house will afford accommodation for some five hundred patients, and the money value of the gift is stated to be about $2,500,000.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 1, 1893.

D. B. St. John Roosa, M.D., President, in the Chair.

To have Refreshments.—The Secretary, Dr. Kalish, read a resolution adopted by the Council, authorizing the President to appoint a House Committee of three. Later the President named Drs. A. E. M. Purdy, J. H. Anderson, and H. Holbrook Curtis, and explained that it was the intention to have a buffet where members and their guests could have light refreshments, and thus meet the complaint which had been heard now and then, that there was no object in joining the Academy, since non-members could profit by all its advantages without contributing to the expenses.

Ozone and Its Medical Uses.—Dr. William J. Morton read a paper on "Ozone and its Medical Uses," and presented an apparatus for its manufacture in the physician's office. Ozone was represented by the formula O_3, oxygen by O_1, and nascent oxygen by O_2. Ozone could be manufactured by chemical processes, but for medical purposes it was generated by the electric current of high tension passing from one electrode to another with an air space between. For direct inhalation it had to be freed from irritating qualities, which was done in the apparatus shown by passing it through a solution of caustic potash, from which it emerged by way of a glass tube. The New York Ozone Company, who manufactured the instrument, had also put on the market different fluids, to which they had given barbarous names, impregnated with the percentage of ozone which they were respectively able to take up. While the author thought they possessed medicinal value, both on account of their germicidal properties when applied locally and because of their constitutional effect when taken internally, these facts had not been so well established as had the therapeutic effect of gaseous ozone. It was more especially in connection with its germicidal properties that ozone had been studied, especially by Ehrmüller, of the Imperial Board of Health of Germany; also in this country, including the author's investigations in connection with Dr. Park, of the Laboratory of the College of Physicians and Surgeons. The investigations started by the Imperial Board of Health of Germany were for the purpose of determining whether ozone, when made on a large scale, would prove an efficient method of disinfecting and purifying the water of the river Spree, and Ehrmüller summed up an article with the statement that his experiments established positively that ozone had a powerfully destructive action on bacteria, provided the water containing them was not too strongly impregnated with organic matter.

Ozone had a strong affinity, so to speak, for organic matter floating in the air, and the field for its usefulness in the disinfection of hospital wards, and also of clothing, etc., promised to be a large one, since new and cheap methods were being devised for its manufacture on a large scale. Indeed, the prediction of Richardson, the discoverer of peroxide of hydrogen, that the time would come when ozone, on account of its sanitary uses, would come to be stored up in great tanks and distributed in pipes like gas, no longer impressed one as the dream of an optimist.

The author had obtained very good results from the use of ozone in certain cases of rebellious nasal catarrh, which he had treated under the direction of Dr. C. C. Rice, and also in some cases of chronic bronchitis. Among others who had used this agent in respiratory troubles, he quoted A. Caille and Norris. These gentlemen had found the inhalation of ozone by patients with phthisis followed by improvement of the symptoms relating to cough, night-sweats, etc., although there had been no change in the physical signs up to the date the reports had been made.

In conclusion, the author thought ozone should be tested on a larger scale in hospital and private practice, in

order that its efficiency as a therapeutic agent might be established on a firmer and wider basis. One truth was clear, it was an oxidizing agent scarcely, if at all, inferior to nascent oxygen, while it possessed the advantage over nascent oxygen that it existed in gaseous form and could be disseminated where the other agent could not be utilized, as in disinfecting wards and in eliminating impurities from the air respired by phthisical and other patients. With it even impure water could be rendered sweet and free from pathogenic germs. Perhaps it could be used for purifying croton water at the lakes.

Dr. A. Caillé said that when he had reported certain cases of pulmonary tuberculosis treated by ozone inhalations, referred to by Dr. Morton, there had so far been only improvement in symptoms and gain in weight, but since then, in one instance the inhalations had been kept up for about a year, the patient having an apparatus of French make at her house, and he could now say that there had also been an improvement in the physical signs at the apex. He expressed some scepticism as to the value of the fluid preparations in the market, especially the oily ones, as he feared the organic properties which they contained would combine with and neutralize the ozone.

Dr. Park and Dr. W. H. Draper made a few remarks, Dr. Draper expressing the hope that ozone would prove valuable in pulmonary phthisis. He thought that it would, at least, be useful in the later stages, when there was mixed germ infection, and also in gangrene of the lung, for its efficiency in destroying pus germs had been shown by the author and others. He inquired as to its germicidal value against the tubercle bacillus.

Dr. Morton replied that he had made no experiments with the destructive effects of ozone on the tubercle bacillus. In their experiments it had killed the staphylococcus pyogenes aureus in five minutes, and one result was the immediate clearing up of the water. Replying to Dr. Caillé, he said the fluid preparations of ozone had been shown by chemical tests made by Dr. Witthaus to give the reaction of ozone even after being bottled for months.

A Plan to Provide Bedside Instruction in Contagious Diseases in New York City.—Dr. John W. Brannan made some remarks upon this subject. At present cases of the contagious diseases were not received into any of our public hospitals, except those under the direct control of the Board of Health, the Willard Parker Hospital at the foot of East Sixteenth Street, and those on North Brother Island. But none of the teaching staff connected with the Medical College, or few of them, had any official connection with the hospitals for contagious diseases, and there was no rule permitting of the use of this material for the instruction of students or practitioners of medicine. The necessity for bedside instruction in the eruptive fevers, diphtheria, and cholera was evident, and while the hospitals referred to were located rather far from the colleges, he knew of no other place at present where students could receive such bedside instruction. He had talked to some of the members of the Health Board, and they had expressed the hope that some arrangement could be made. The teachers would, he thought, have to be those who had the actual treatment of the cases. Perhaps they could be compensated by the colleges, which should avail themselves of the opportunity of sending those about to graduate to receive these bedside lessons.

Dr. W. H. Draper regarded the subject brought up by Dr. Brannan as a very important one, for it was extremely desirable that those who were about to enter upon the practice of medicine should be able at once to make a correct diagnosis of any of the contagious diseases which might come under their care. He believed, however, that the general hospitals should have suitable arrangements and be permitted to receive such cases, so that the professors of the colleges who were on the medical staff could utilize this material as they did that of any other nature for bedside instruction. The danger of the diseases spreading in the hospital or outside was so slight, under modern precautions, that it might be left out of consideration. An example of the entire safety of such a method had been shown in King's College Hospital, London. Or a fever hospital might be erected within the city.

Grandmother as a Diagnostician.—Dr. George F. Shrady fully indorsed the views of Dr. Brannan and Dr. Draper as to the necessity for bedside instruction in contagious diseases, and agreed with them in the fact that medical students and young practitioners were entirely without practical instruction in those lines.

He said he had himself been an awful example of a practitioner who had started out with good, even better than the usual, general preparation, but without a knowledge of contagious diseases. "I was called to see a child on the fourth floor of a tenement house. The mother and grandmother were present. The latter was at the washtub. I saw a child lying in the crib, with a rosy mottled eruption covering the face and hands, suffusion of the eyes, nasal discharge, and the panting respiration of high temperature. I concluded that there was something the matter with the child, but was entirely at a loss to know what the many signs indicated. Finally the grandmother turned from the washtub, wiped her hands with her apron, and, looking at me askance, with her arms akimbo, asked, 'What is the matter with the child?' I pretended not to hear her, being very busy counting the pulse. Finally she repeated the question, and I replied: 'Oh, well, you know, we call—that is, a doctor—I would call that conjunctivitis.' She looked at me and I looked at her, and I felt that the struggle for victory between doctor and grandmother was getting to be a pretty hard one, when she said, 'Is that the doctors' name for measles?'

"'What did you say?' I asked, wishing still to be non-committal.

"'Is that the doctors' name for measles?' she repeated.

"'Oh, of course,' I replied, recovering myself with becoming dignity and assumed composure."

That was the first time he had ever seen a case of measles, and his experience had probably been more fortunate than that of many recent graduates. It was, however, a trifle mortifying for the young doctor to have the diagnosis of such a common disease made for him by an Irish washerwoman. In conclusion he remarked that he would, with the sanction of the health authorities, do all he could in his relations to the Willard Parker Hospital to further the efforts of the Academy in bringing about some practical result in this important matter.

Dr. Herman M. Biggs spoke as a member of the Academy, not in his official relation to the Health Board, strongly in favor of utilizing the wards at the Willard Parker and North Brother Island Hospitals for bedside instruction in contagious diseases. The necessity for such instruction was made apparent very often to the Board of Health by failure on the part of physicians to diagnose small-pox and other contagious diseases which they were required to report to the Health Department.

Dr. J. West Roosevelt said that some years ago there was an opportunity through private philanthropy to establish a fever hospital in the city, but the public and the press made such an ado about it that the project had to be dropped. He thought the profession was to blame for this panicky feeling as to the danger of the spread of contagious diseases, even though under the surveillance of physicians in hospitals. It grew largely out of the useless and fussy attempts at disinfection of rooms by burning sulphur.

Dr. Kirschner related some of his first experience with small-pox, cholera, etc., impressing the difficulty of diagnosis without ever having seen a case. It would be a great advantage if students could pass through the wards of the hospitals even without special instructions, the card at the head of the patient's bed announcing the diagnosis.

Dr. Brannan made some closing remarks. The Academy then adjourned until October.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 3, 1893.

	Cases.	Deaths.
Typhus fever	8	4
Typhoid fever	13	7
Scarlet fever	158	14
Cerebro-spinal meningitis	15	20
Measles	166	8
Diphtheria	147	41
Small-pox	13	2
Cholera	0	0
Varicella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

Boric Acid in Typhoid Fever.—Dr. Tortchinsky has tried boric acid in 240 consecutive cases of enteric fever during an epidemic. The results were excellent; only 9 patients died, every one of whom succumbed during the stage of convalescence, in consequence of getting up too soon, or of dietetic error (*The British Medical Journal*). The remaining 231 made a speedy and complete recovery. In all the cases the patient was first given from 2 drachms to ½ ounce, according to age, of castor-oil, with from 5 to 20 drops of turpentine oil. Immediately after these drugs had acted the administration of boric acid was commenced, the remedy being given internally, either in powder or in solution, in from 10 to 15 grains to adults, in from 3 to 10 to children, 3 or 4 times a day. When bronchitis was present, the drug was combined with expectorants and hydrochloric acid. As a rule, within from 3 to 5 days fever and diarrhœa markedly decreased, tympanites disappeared, the stools lost their offensive odor and became natural in appearance, the urine became abundant and normal in all respects, the tongue and skin moist, the subjective state good, etc. As soon as the general improvement set in, the acid was discontinued, and tonics were given. Under the treatment the disease ran a very mixed course, its duration was considerably shortened, and complications were very rare. The most striking effects of the acid were obtained in cases which came under treatment in the initial periods of the affection. It was further found that the beneficial action of the remedy could be intensified by combining it with small doses (from 2 to 5 grains) of antifebrin, quinine, naphthalin, or salol. The combination with quinine proved especially useful in late stages of typhoid, with tremor, delirium, and other cerebral symptoms, as well as in the case of relapses. No untoward accessory effects from boric acid were ever observed. The writer arrives at the conclusion that the method is the cheapest, simplest, most harmless, and most efficacious of all yet known. He also obtained equally satisfactory results from the acid in the summer diarrhœa of children.

The Present Status of Drainage in Surgery.—Dr. Cartledge presents the following summary of his views on drainage, in the *Medical News*, February 4, 1893: 1. The principle of artificial drainage in surgery, while very ancient, was imperfectly understood, and was oftentimes as much a factor for evil as for good. 2. Though our knowledge of the principles that govern a healthy regeneration of wounded structures has greatly advanced, and our progress in wound-therapeutics has kept pace, we fail to appreciate how artificial drainage can be altogether dispensed with in surgical practice. 3. To lessen the use of artificial drainage it is necessary to thoroughly apply the principles of asepsis and antisepsis, combined with buried sutures, fixation, and alimentary or systemic drainage. 4. If for any reason the exudation of serum cannot be controlled, its removal by drainage is a safer surgical measure than any attempt at sterilization *in situ*. 5. The time required for primary drainage is from twenty-four to sixty hours; to wait longer is to encourage trouble; to remove sooner than twenty-four hours is to take unwarranted risks. 6. Capillary drainage is to be preferred to tubular drainage in wounds other than those of the large cavities. For this purpose absorbable material should be selected, catgut being the best. 7. When it is desirable to combine hæmostasis and drainage in the same measure, the strips of iodoform-gauze, as recommended by Mikulicz, fulfil a most useful purpose. 8. When natural drainage can be utilized without producing unsightly cicatrices, artificial drainage should be dispensed with; when feasible, the two should be combined. 9. Wounds involving the brain and cord had best be drained, to avoid mechanical violence to the function of delicate structures by retained serum. 10. Necessity for artificial drainage will most often arise in wounds invading the large cavities; herein flexible, tubular, glass drains best meet the requirements, aided or not by materials acting by capillarity. 11. The method of secondary suture after primary wound-secretion is over, advised by Kocher, seems to possess no advantage over drains that have to be removed, and certainly is not to be compared in convenience, comfort, etc., to the patient, to absorbable capillary drains.

Hysteria in Children.—Professor Jolly says that hysteria in children may take the form of periodical outbursts of peculiar mental disturbances or may produce local symptoms. Most commonly vague pains are complained of in various parts of the body (particularly in the joints), these pains being frequently accompanied with spastic conditions of the limbs (rarely paralyses) and anæsthesias. Both sides of the body are affected in the great majority of cases, although occasionally there may be a monoplegia or hemiplegia. To the above symptoms tremors may be added; these tremors may in some cases be the first thing complained of, especially in cases where traumatic influences have been at work. Further, spasms may occur in the muscles of speech and respiration (sharp cries, singultus, etc.). The speech may become stammering or confused, or the patient become perfectly dumb for a longer or shorter period, and this may even be accompanied by deafness. In some cases observed by Dr. Jolly "hysterical blindness" occurred. As regards anæsthesia of the skin and deeper parts, this was usually but slightly marked—diminution of the sense of touch, lessened sensation to pain, and contraction of the field of vision. The hysterical attacks were generally characterized by screaming, crying, and laughing, accompanied by convulsive movements of the extremities. There was commonly some slight loss of consciousness, but as a rule the patient retained some recollection of what had occurred. The treatment which proved most effectual was isolation, dashing cold water over the child, the faradic current, and judicious verbal correction. With regard to the cause of the hysteria, Dr. Jolly found that there was in most cases a history of a nervous disposition in the parents, this being frequently added to by debilitating diseases and bad feeding, anæmia, and unfavorable moral surroundings. Education and imitation also exerted powerful influence.—*The Lancet*.

The Hodgkins Fund Prizes of the Smithsonian Institution.—In October, 1891, Thomas George Hodgkins, Esq., of Setauket, New York, made a donation to the Smithsonian Institution, the income from a part of which was to be devoted "to the increase and diffusion of more exact knowledge in regard to the nature and properties of atmospheric air in connection with the welfare of man." With the intent of furthering the donor's wishes, the Smithsonian Institution now announces the following prizes to be awarded on or after July 1, 1894, should satisfactory papers be offered in competition:

1. A prize of $10,000 for a treatise embodying some new and important discovery in regard to the nature or properties of atmospheric air. These properties may be considered in their bearing upon any or all of the sci-

ences—*e.g.*, not only in regard to meteorology, but in connection with hygiene, or with any department whatever of biological or physical knowledge.

2. A prize of $2,000 for the most satisfactory essay upon—(*a*) The known properties of atmospheric air considered in their relationships to research in every department of natural science, and the importance of a study of the atmosphere considered in view of these relationships: (*b*) The proper direction of future research in connection with the imperfections of our knowledge of atmospheric air, and of the connections of that knowledge with other sciences. The essay, as a whole, should tend to indicate the path best calculated to lead to worthy results in connection with the future administration of the Hodgkins foundation.

3. A prize of $1,000 for the best popular treatise upon atmospheric air, its properties and relationships (including those to hygiene, physical and mental). This essay need not exceed 20,000 words in length; it should be written in simple language, and be suitable for publication for popular instruction.

4. A medal will be established, under the name of The Hodgkins Medal of the Smithsonian Institution, which will be awarded annually or biennially, for important contributions to our knowledge of the nature and properties of atmospheric air, or for practical applications of our existing knowledge of them to the welfare of mankind. This medal will be of gold, and will be accompanied by a duplicate impression in silver or bronze.

The treatises may be written in English, French, German, or Italian, and should be sent to the Secretary of the Smithsonian Institution, Washington, before July 1, 1894, except those in competition for the first prize, the sending of which may be delayed until December 31, 1894. The papers will be examined, and prizes awarded, by a committee to be appointed as follows: One member by the Secretary of the Smithsonian Institution, one member by the President of the National Academy of Sciences, one by the President, *pro tempore*, of the American Association for the Advancement of Science; and the committee will act together with the Secretary of the Smithsonian Institution as member, *ex officio*. The right is reserved to award no prize if, in the judgment of the committee, no contribution is offered of sufficient merit to warrant an award. An advisory committee of not more than three European men of science may be added at the discretion of the Committee of Award. If no disposition be made of the first prize at the time now announced, the Institution may continue it until a later date, should it be made evident that important investigations relative to its object are in progress, the results of which it is intended to offer in competition for the prize. The Smithsonian Institution reserves the right to limit or modify the conditions for this prize after December 1, 1894, should it be found necessary. Should any of the minor prizes not be awarded to papers sent in before July 1, 1894, the said prizes will be withdrawn from competition. It is probable that special grants of money may be made to specialists engaged in original investigation upon atmospheric air and its properties. Applications for grants of this nature should have the indorsement of some recognized academy of sciences, or other institution of learning, and should be accompanied by evidences of the capacity of the applicant, in the form of at least one memoir already published by him, based upon original investigation. Information of any kind desired by persons intending to become competitors will be furnished on application. All communications should be addressed to S. P. Langley, Secretary of the Smithsonian Institution, Washington, D. C., U. S. A.

A Sojourn in Egypt as a Remedy for Sterility.—De Lesseps once stated that all the conquerors of Egypt, from the Hyksos down, had been compelled to loose their clutch on that country because they failed to reproduce their race while in it. This may apply to the French, whose reproductive powers appear to be failing, even in their native land; but it does not affect the English. Indeed, the truth seems to be quite the contrary; for so prolific has the Anglo-Saxon proved in Egypt that childless couples are now recommended to visit the Nile Valley. In one case, a bride of twenty years' standing, presented her lord with their first child while sojourning in Assouan, in the extreme south of Egypt.—*The Times and Register.*

Professor Alphonse de Candolle, the well-known botanist, is dead. He was the son of Augustin Pyramus de Candolle, and was born in Paris in 1806. He was for many years director of the Botanical Garden at Geneva, in which post he succeeded his father.

Cruel Treatment of a Hospital Interne.—One of the ward clerks of Dr. Bucquoy in the Hôtel Dieu, Paris, contracted typhus fever while in the discharge of his duties. He was at first isolated in a special ward and attended by a special nurse, but a week later, by order of the authorities, and without any notice to Dr. Bucquoy, the patient was transferred across the river to the old Hôtel Dieu. Here he was placed in the common typhus fever ward in the company of rogues and vagabonds hailing from that part of Paris where the epidemic first developed. Just before his death he was removed from the common ward and placed in a room by himself, but his former associates have addressed an energetic protest against the treatment of the poor fellow to the Parisian authorities

A Hospital for Consumptives has been established at Angicourt, in the Department of the Oise, by the municipal authorities of Paris. The measure was rendered urgently necessary in consequence of the overcrowding of the general hospitals by phthisical patients.

Memorizing Doses.—The following rules, with their exceptions, were formulated by Professor G. A. Wiggins: 1. The dose of all infusions is one to two ounces, except infusion of digitalis, which is two to four drachms. 2. All poisonous tinctures, five to twenty minims, except tincture of aconite, which is one to five minims. 3. All wines from one-half to one fluid drachm, except wine of opium, which is five to fifteen minims. 4. All poisonous solid extracts, one-half grain, except calabar bean, which is one-sixteenth to one-fourth grain. 5. All dilute acids, five to twenty minims, except dilute hydrocyanic acid, which is two to eight minims. 6. All aquæ from one to two ounces, except aqua lauro-cerasi and aqua ammoniæ, the dose of which is ten to thirty minims. 7. All medicated syrups, one drachm. 8. All mixtures, one-half to one fluid ounce. 9. All spirits, one-half to one fluid drachm. 10. All essential oils, one to five minims.—*Pharmaceutical Record.*

Testing the Virulence of Cholera Bacilli.—The experiment of Professor Pettenkofer, designed to test the virulence of the comma bacilli, has been repeated by Dr. Hasterlik and three other physicians at the Pathological Institute, Vienna. The cultures used were derived partly from German and partly from Buda-Pest cases of cholera, and the quantity of culture employed in each case was one cubic centimetre. In two experiments 100 grammes of 1 per cent. solution of bicarbonate of soda were taken before swallowing the culture, with the design of neutralizing the acidity of the stomach. In two of the experiments only out of the six was diarrhœa observed, and that merely in a slight form; while in the remaining three no effect whatever was produced. The defecations were examined microscopically and revealed the presence of bacilli.—*The Lancet.*

Dead Children as Medicine.—A man in the prefecture of Miye, Japan, recently dug up the corpse of a newly buried child and ate a portion of the flesh in the hope of curing himself of a disease from which he was suffering. The authorities did not share his peculiar ideas of therapeutics, and caused his arrest and sentence to imprisonment for three months.

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Original Articles.

CERTAIN NEW VIEWS CONCERNING THE DIAGNOSIS AND TREATMENT OF ROUND ULCER OF THE STOMACH.

By I. BOAS, M.D.,

BERLIN, GERMANY.

Notwithstanding the fact that so much has been said and written concerning the diagnosis of round ulcer of the stomach (and since Cruveilhier first gave this disease a special nosological position, no disease of the stomach has been the subject of more study), nevertheless no doubt exists, to those who have paid special attention to this subject, regarding the difficulty of the diagnosis of ulcer in cases in which hemorrhage is absent; and only to these forms do we wish to call attention in this paper. Nearly as frequent as the above forms are those in which the physician makes the diagnosis by carefully questioning the patient, or where the whole complex of symptoms is so plain that no one would doubt for a moment what their underlying trouble is.

In a large percentage of cases both the statements given by the patient, as well as the conditions found objectively, are so little characteristic that, although a round ulcer of the stomach may be thought of, still the other gastric affections cannot be excluded. In still other cases simple gastro-intestinal symptoms are present, which may be characterized, though rather indefinitely, as dyspeptic.

Both classes are apt to cause the clinician considerable annoyance, for the diet, medicinal treatment, and balneotherapeutics are very different according to whether an ulcer, a nervous dyspepsia, or even a chronic gastritis be present. Von Leube (whose work on the treatment of chronic ulcer of the stomach is recognized by all clinicians) long ago recommended the plan of placing patients, in whom the diagnosis of ulcer is doubtful, on trial treatment, the diagnosis being made afterward according to the effect produced. But it must be admitted that this form of treatment as a diagnostic measure is disadvantageous in many ways, and can hardly be carried out in all cases.

We must therefore not give up our attempts to extend and improve our present methods of examination. In reviewing these methods, we must consider first of all the information received from questioning the patient (which I by no means undervalue), then the age, the constitution, and finally the peculiar conditions found on examination of the stomach.

The information received from questioning the patient is important, because in this way it is ascertained whether the patient has previously suffered from gastric hemorrhage or from symptoms peculiar to ulcer; we also learn in this way something concerning the development, the cause of the disease, and especially concerning the peculiar form of complaint. By carefully questioning the patient we are led without doubt in some cases to the right path; in other cases, however, no distinct information is gotten in this way. The gastric complaints are often exceedingly various: sometimes severe gastralgias are present; sometimes a localized soreness; sometimes the pains arise immediately after meals, sometimes before meals, and cease later, to reappear again a short time after meals In some cases the intensity of the pain is directly dependent upon the quality of food, being most severe after the swallowing of solid food, in other cases a difference in this regard is not noticeable. I have also seen cases in which an intermittent form of gastralgia was present, a neuralgia being simulated. Sometimes distinct pain does not exist, but merely an unpleasant feeling or a feeling of anxiety after swallowing food, a condition which is especially met with in cases where the ulcer has advanced to the stage of healing. The objective symptoms next in order relate to age and constitution. That young chlorotic girls are predisposed to ulcerous formations of the stomach is well known to all physicians; also that ulcers are apt to occur at the age of puberty or thereabout.

This rule has, however, many exceptions, since ulcers of the stomach may occur under the most variable circumstances. I need only mention those carefully observed cases of gastric and duodenal ulcer due to traumatism or burns, which have likewise been produced experimentally. But ulcers are also found at very different ages; especially are they frequent in hard-working women (more rarely men) living under unfavorable hygienic surroundings and not afflicted with chlorosis or any other abnormal condition of the blood. The diagnosis is based upon the presence of localized pain in the epigastric region and upon the examination of the contents of the stomach. That the former may, though rarely be absent is known. Of greater importance is the fact that up to a short time ago we have had no method to determine the depth and intensity of the pain caused by pressure. Pain or pressure over the epigastrium and surrounding regions may also be present in cases of chronic gastritis, neuroses of the stomach, carcinoma, atony, localized peritonitis, cholelithiasis, etc. Who would attempt to say from which organ it takes its origin? When in the middle of the eighties, after the examination of the contents of the stomach was introduced by Ewald and myself in a manner useful for practical purposes, special attention was turned in this direction to ulcer of the stomach, Riegel and his pupils, besides Jaworski, Van den Velden, and others, frequently found an increase of free hydrochloric acid in cases of gastric ulcer (superacidity). On the one hand, this condition is not constant; on the other, other disturbances of the stomach, especially gastric neuroses, are accompanied by increased secretion of HCl; so that only in single instances (however, not in most cases) can a diagnostic significance be attached to this fact. Of greater importance is the examination for hydrochloric acid in those cases in which the differential diagnosis lies between ulcer and cancer; yet, even in the latter, hyperacidity may exist when the growth has its seat upon the base of a former ulcer. We have then, according to the above, a series of useful but by no means positive signs for gastric ulcer.

For several years I have been paying special attention to the question of the character and nature of the local pain on pressure; above all, to the pain caused by pressure in the dorsal region, which, though recognized long ago by Cruveilhier, and called by him "point rhachidien," has practically received but little attention. I have found that a dorsal point, painful on pressure, could be frequently observed—being almost as constant as that in the epigastric region—and that this point is so sharply circumscribed that for diagnostic purposes it has far more value than that in the epigastric region. This dorsal pressure point is found at the level of and to the left of the tenth to the twelfth dorsal vertebra, rarely higher or lower. The

painful area lies usually directly against the vertebra, rarely some distance away from it. In a few instances a localized painful area is found on both the left and the right side. In certain rather doubtful cases of ulcer I have also found a painful area only to the right in the same region.

In order that this sign may have a diagnostic value, the fact must be determined whether localized painful points may not be found in other troubles not connected with the stomach.

My experience, which rests on considerable material, has convinced me that in no other disease, and especially no other disease of the stomach, is such a painful area to be found with equal constancy. However, painful areas are to be found in the dorsal region in two diseases of the stomach, and also very frequently in gastric neuroses. In such cases, however, the left side is by no means alone involved: moreover, the location of the pain is by no means fixed: it may be found high up in the cervical region, then again in the upper or lower dorsal region. Pressure points of a similar nature are sometimes, though not frequently, found in cases of cancer of the stomach and of the œsophagus. But these pressure areas do not show that marked local character, but rather a diffuse nature, and are most likely due to the presence of infiltrated metastatic glands or of adhesions of the tumor to organs lying back of it.

An important diagnostic painful area, and one as yet undescribed, is found in cholelithiasis in the back at the region of the twelfth dorsal vertebra and somewhat to the right side; this is found at the time of the attack and even a few days, weeks, or months thereafter—then, however, not so well marked. In a large number of cases, where the diagnosis rested for a long time between gastric ulcer and gall-stones, I was able to diagnose cholelithiasis by means of the above sign, and correctly too, as the future course of the disease proved. That in cases of muscular rheumatism, of pleuritic exudations, of caries of the vertebra, etc., more or less sharply localized painful points occur, is well known, and must be taken into consideration in special cases; but these diseases rarely come into question in the way of diagnosis from those considered in this paper.

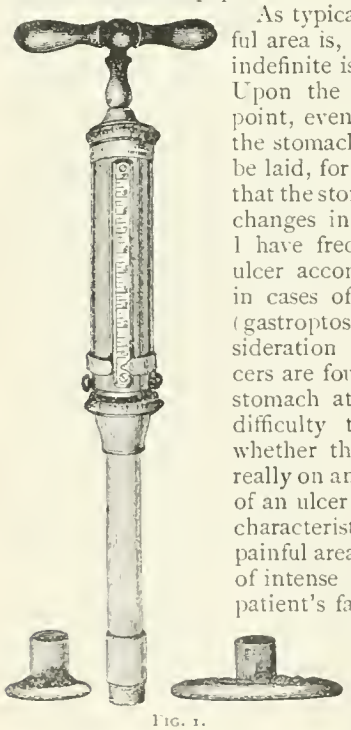


FIG. 1.

As typical as the epigastric painful area is, in well-marked cases, so indefinite is it in less marked ones. Upon the position of the pressure point, even if it be in the region of the stomach, too much stress cannot be laid, for it must not be forgotten that the stomach is subjected to great changes in regard to its position. I have frequently observed cases of ulcer accompanied by hemorrhage in cases of descent of the stomach (gastroptosis), leaving out of consideration entirely the fact that ulcers are found in all regions of the stomach at times. The principal difficulty to decide, however, is whether the painful area depends really on an ulcer or not. The pain of an ulcer is, when intense, rather characteristic. Even when the painful area is lightly touched, signs of intense pain are observed in the patient's face, such as I have never noticed in any other stomach affection. This is, however, only to be found in cases where the ulcer is very superficial or extensive. For a number of years I have utilized an instrument which seems useful in explaining the exact condition of affairs in many cases. The apparatus—which I have named "algesimeter," and first described in the second edition of my "Diagnosis and Therapeutics of Diseases of the Stomach"—is constructed on the plan of a hand-scale, and consists (Fig. 1) of a cylinder in which a compressed wire spring is enclosed. In communication with the spiral is a pen-point, which points to an empirical, though exactly graduated scale (divided into whole and half kilogrammes), according to the pressure exerted upon the pads. In order to still better localize the painful area, pads of different sizes are constructed. Under normal conditions a pressure of from six to eight kilogrammes can be endured without causing pain; under pathological conditions, however, a pressure of one-half to one kilogramme may cause severe pain. Further investigations have shown me that, of all gastric affections, the pain in cases of chronic ulcer is most severe, while in chronic gastritis it is comparatively slight. Between these lie gastric cancer and neuroses. In cases of ulcer, a pressure of over three kilogrammes is scarcely borne without pain; while in cases of gastritis, nervous dyspepsia, and carcinoma, a pressure of from five to six kilogrammes can be endured. Naturally superficially situated cancers (those which may be diagnosed by inspection) serve as an exception to this rule. Under normal conditions the pain felt on pressure in the back is very slight; a pressure of ten kilogrammes or above this does not produce an unpleasant sensation. In cases of ulcer, however, I have observed that four or five kilogrammes, or even less than this, would frequently produce pain in this region.

The algesimeter has, further, a special importance in directing the treatment. We can by means of it determine week by week the results of our therapeutics, and can, by comparing the effects obtained with those gotten from the normal individual, conclude with a degree of certainty whether the ulcer has healed or not. As a therapeutic measure must be mentioned the well-known ulcer treatment of Leube and Ziemssen. It depends upon the principle of rest in bed, hot applications, and the administration of Carlsbad salts or water, in addition to restrictions in diet. This form of treatment has been practised mainly in Germany, and very correctly. The instances are rare in which hot applications are not as well borne as the so-called hydrotherapeutic forms. Of course, the treatment described above does not prevent relapses, for, although we are able in many cases to heal the local ulcer, we are not able to exert any influence on the as yet unknown predisposition. It is not possible to carry out in all cases the method of Leube-Ziemssen, for several weeks' confinement to bed and room must necessarily demand a sacrifice, especially from those belonging to the working classes, which but few persons are, in fact, able to make. In these cases I have been in the habit for over two years of prescribing a systematic nitrate of silver treatment. The use of nitrate of silver in the treatment of gastric ulcer is not new. Autenreith utilized this remedy in 1829, though only for cardialgia. It has been given mainly in pill form; rarely have solutions been prescribed. The opinions concerning the healing powers of this remedy on the ulcer itself vary considerably; but few modern authors have recommended the use of this substance as earnestly as I really believe its merits warrant.

Of course, in order to have results, the doses must be markedly increased. I am accustomed to begin with solutions of 0.2 to 120 (gr. iij.–℥ iv.), of which a tablespoonful is given three times daily; in the second week I increase to 0.3 to 120 (gr. ivss.–℥ iv.), and, if then the most prominent symptoms of the ulcer have not disappeared, I increase to 0.4 to 120 (gr. vj.–℥ iv.). In all cases, four bottles of the solution are to be taken. The drug should be diluted in a wineglass of water and swallowed on an empty stomach. In order to free the mouth of the metallic taste, the patient is advised to gargle with a weak salt solution until the water is no longer cloudy. I have never prescribed nitrate of silver in pill form. In order to determine the curative effect of nitrate of silver, I have had systematic algesimetric measurings carried out (in marked cases of gastric ulcer) in the painful areas of the epigastrium and dorsal regions, and have convinced

myself of the gradual disappearance of pain in these regions. The following curves (Fig. 2) illustrate the nitrate of silver treatment obtained by means of the algesimeter. The pain in the pressure area diminishes gradually after the treatment with nitrate of silver has been instituted; that in the dorsal area quickest. After three weeks the algesimeter values sink to six kilogrammes, and finally fall to seven. The selected example is only a paradigm. I could produce numerous examples in which similar subjective and objective effects were observed.

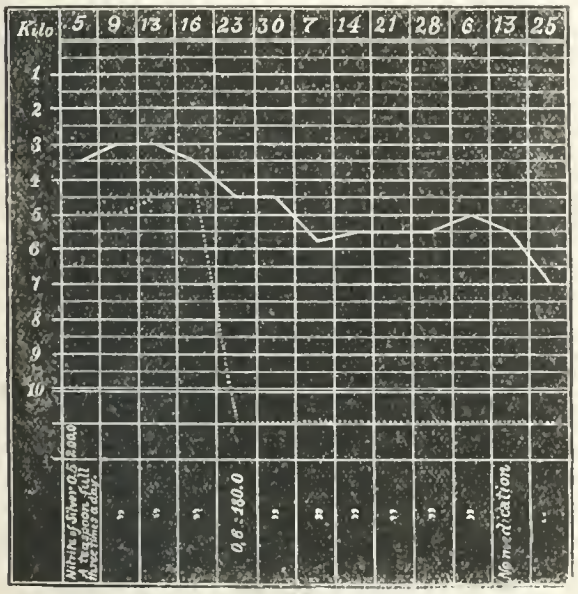


Fig. 2.

But seldom is this remedy not well borne, or, in fact, not borne at all. The appearance of diarrhœa, one of the most frequent annoyances, is in so far not unpleasant to the patient, inasmuch as constipation has previously existed, at least in most instances. I regard the nitrate of silver treatment as described above as an exceedingly efficient and prompt method in the treatment of this condition. Especially is it to be recommended in such cases where an ambulatory treatment must, on account of special reasons, be carried out.

Such rebellious and resistant forms of round ulcer of the stomach are sometimes met with as to try sorely the patience of both physician and patient. Especially is this the case when, after a confinement to bed for several weeks, together with rigorous restrictions in diet, the patient is still tortured with violent pains. In such cases we hardly know who is in the most unpleasant position, the physician or the patient! For such persistent and intractable cases I have found a method of value, which was recommended by McCall, Anderson, and Donkin, of England, some years ago, for the treatment of ulcer in general—that is, a ten to fourteen days' absolute abstinence from food, with only rectal alimentation. The latter is pursued in such a manner that the patient receives one injection every three hours, consisting of two hundred and fifty grammes of milk (one half pint), two egg yolks, one teaspoonful table-salt, one tablespoonful red wine (or port wine or whiskey, etc.), one tablespoonful of flour. The whole is heated, and in the form of an injection is passed slowly into the bowel by means of a Hegar's tube. It is remarkable how quickly, by means of such an injection, the feeling of hunger is relieved. I was able last summer to make the observation on a physician, whom I treated for a stubborn form of gastric ulcer, that water injections alone were not sufficient to relieve the feeling of hunger, but that certain nutrient substances, which might be absorbed into the blood, were necessary for this purpose. The treatment spoken of above was carried out by the English authors for three weeks; I have, however, found that ten to fourteen days is quite sufficient. In all the cases under my observation the spasmodic torturing pain disappeared almost as quickly as the treatment was instituted. The great thirst which appears at times can be relieved by soda or vichy water. I have not found it necessary to use any medicinal treatment on my cases, though there is no objection to the nitrate of silver treatment in connection with the abstinence method. After ten to fourteen days, fluids may be first given, and soon thereafter solids. I have treated about a dozen cases of stubborn forms of ulcer of the stomach according to this method, and have had good results with all, with but one exception. However, I must add that, even after the use of this heroic method, for reasons given above, relapses may occur. The patients rapidly recover from their wearisome treatment, and if they can be prevented from indulging in excesses of food this method proves invaluable in those cases in which other methods have proven fruitless. Inasmuch as it is not my object to go into details regarding the treatment of gastric ulcer (which I have recently done in full in my "Diagnosis and Treatment of Diseases of the Stomach," Leipsic, Thieme, 1893), I must abandon all attempts to discuss the value or uselessness of bismuth and morphine in this condition. I only wish to add that such drugs as morphine and other alkaloids of opium (especially codeine) have a marked palliative effect in the treatment of ulcer of the stomach.

N. W. Alexander, Ufer 6.

A CASE OF MYXŒDEMA, TREATED WITH THYROID EXTRACT BY THE STOMACH, AND A DESCRIPTION OF THE METHOD OF PREPARING THE EXTRACT.

By GEORGE W. CRARY, M.D.,

NEW YORK.

This report, given as concisely as possible, adds its weight to the testimony already adduced, especially in England, as to the efficacy of the administration of the thyroid glands of the sheep in the treatment of myxœdema, a disease characterized by a more or less total absence of the same glands in man. For convenience, elegance, and exactitude of dose, the glycerine extract was used rather than the glands themselves. Administration by the stomach was considered to be safer than by hypodermatic injection, and had also the great advantage of allowing relatively smaller doses to be given with greater frequency, at a minimum of inconvenience to the patient, and without the constant attendance of a physician. These points are, I think, of great importance, because of the necessarily long continuance of the treatment, there being no reason to expect that it may be stopped during the life of the patient without a recurrence of the symptoms. This case was a well-marked one, and of long standing, the patient dating the beginning of her present condition from the birth of her youngest child, nine years ago. The history of the case is as follows:

Mrs. A——, aged forty-three. When three years old this patient had an attack of otitis media following exposure on a sleigh-ride. This has never been entirely quiescent, and there are occasional exacerbations. When seven years old she suffered severely with eczema of the scalp, so that the head was shaved and caps worn. At thirteen years menstruation began, and was difficult and painful, and the patient received considerable local treatment. At fourteen she had varioloid. At sixteen, being subject to recurring attacks of tonsillitis, she had her tonsils removed. When she was seventeen she had scarlet fever. In 1872, when twenty one years old, the patient was married.

While carrying her first child Mrs A—— twice had a severe fall, and once received a heavy blow upon the abdomen. When three months gone, an attack of general peritonitis set in and her life was despaired of. This first child, an eight months' infant, was born after a severe labor lasting twenty-eight hours, during which chloroform was used. This child died of hydrocephalus

when seventeen months old. The fourth pregnancy ended in miscarriage at the third month, and there was considerable hemorrhage. The last and eighth child was born August 1, 1884. During this last pregnancy the patient had a monthly discharge of fresh blood per urethram. She was also much depressed mentally. She describes her labors as all being difficult. It will be seen that this patient, during eleven years, gave birth to eight children and had one miscarriage.

In October, 1884, about two months after the birth of the last child, the patient had an attack of acute Bright's disease, during which the temperature went as high as 107° F. Seven years ago, after sitting in a cold draught, she was attacked with left facial paralysis. Five years ago she suffered from a severe attack of typho-malarial fever.

Seven of the children are living and all in good health: the two youngest being, perhaps, the most sturdy. All have a tendency to eczema, more marked in some than others.

In January, 1892, the patient presented the following conditions: There was marked swelling at the side of the face, in the neck, and in the supra- and infra-clavicular regions, which swelling did not pit on pressure. The eyelids were puffy, eyebrows arched in a characteristic manner. The lips were large, protruding, and bluish. The tongue was thick, and could be moved but slowly and imperfectly in the mouth. The fauces were swollen. There were a few fine hairs on the upper lip. There was a spot of hectic on each cheek, with a patch of cloasma over the left malar bone. The skin of the whole body was dry and waxy, with some tendency to desquamation on the extremities. The patient never sweated, even with phenacetin and hot mustard foot-baths. Rubbings and sinapisms did not cause redness of skin, and the latter, even when strong, caused no burning sensation to the patient. There was some difficulty in swallowing, especially solid food, which often remained for some minutes in the œsophagus and occasionally was regurgitated. The patient breathed with difficulty through her nose, the act of "blowing the nose" was accomplished without satisfaction, and there was loud snoring during sleep. The fingers and hands were so swollen, and the skin covering them so dry and tense, that they were clumsy, and the patient could not use them well. The nipples were entirely hid by the swelling in the breasts. This last had, according to the patient's testimony, existed since her marriage, so that nursing had been interfered with. Dyspnœa was present in attacks, not constant. The abdomen was large and pendulant, and there was a small umbilical hernia. There was no hair in the axillæ; that on the scalp was thin and falling, and the pubic hair was thin and fine. The cutaneous sensibility to cold was very great, and during the cold months all the myxœdemic symptoms were exaggerated. The patient was very deaf, this more marked on the right side, the seat of the now chronic otitis media. There was melancholia, sometimes marked, but the mental faculties were otherwise unimpaired, though the patient thought that her memory for small details was not so good as it had been. There was anaphrodisia, and the menstrual function had been suppressed almost since the birth of the last child. The patient often stained her pillow with prune juice-colored fluid, which came from the mouth while she was asleep; and twice during three months previous, there had been an attack of quite profuse bleeding from the mucous membrane back of the fauces, lasting each time for a few hours, and being accompanied by a sense of fulness in the head. During these attacks calomel and nitro-glycerine were administered. Bell's paralysis showed plainly. There was no thyroid gland to be felt.

The patient, while somewhat weak, was up and about attending to her family duties and the care of her children. She required regularly every morning a dose of rubinat water to move her bowels. The urine contained albumin, but no casts. Temperature by mouth, 97.5° F.: pulse, 90. The patient complained of pain in the ankles and wrists, and also in the ears.

During this year the symptoms showed a gradual progression of the disease, and on November 24th the following conditions presented: There was fulness in the head and slight bleeding from the mucous membrane of the pharynx. Dyspnœa was constant, and was aggravated by lying down. There was no œdema of the lungs. Solids could not be swallowed at all, and liquids slowly and with great difficulty. There was pain and tenderness situated deeply along the anterior border of the right sterno-mastoid muscle, great muscular weakness, especially in the lower extremities, insomnia, restlessness, irritability, hysteria, and melancholia, the patient having even attempted to throw herself out of the window. Pulse, 100 and hard; the bowels move naturally, but there is some flatulence. The pain in the ankles and wrists was more severe, as were also the pains in the ears. Urine showed albumin, 1 gm. to the litre. And at this time all the other symptoms of the disease were more strongly marked, the patient presenting the characteristic general appearance and slow and somewhat labored speech of the myxœdemic. December 9, 1892, Dr. Starr saw the woman in consultation, and the following treatment was recommended; nitro-glycerine, gr. $\frac{1}{100}$; strychnine, gr. $\frac{1}{60}$; liq. ferri albuminat., gtt. xv., with pepsin t.i.d., and the administration of the extract of the thyroid glands.

From December 9th to December 18th, while the extract was being prepared, the temperature by the mouth ranged from 97.8° to 99° F., and the pulse from 84 to 96.

December 18th.—General condition of patient somewhat improved. Swelling of face and neck very slightly less marked, muscular power somewhat increased. Mental condition unchanged.

December 19th.—The above drug treatment being continued, the extract of thyroid glands (*vide infra*) was begun, and given by stomach in doses of ten minims three times a day. 9 A.M., temperature, 98.4° F.; pulse, 94. 3 P.M., temperature, 100° F.; pulse, 104.

December 20th.—9 A.M., temperature, 99° F., pulse, 96.

December 21st.—9 A.M., temperature, 100° F.; pulse, 112. 2 P.M., temperature, 100° F.; pulse, 112. 5 P.M., temperature, 100.4° F.; pulse, 116.

December 22d.—9 A.M., temperature, 99.2° F.; pulse, 110. 3 P.M., temperature, 100.3° F.; pulse, 114.

Although the temperature and pulse were thus caused, apparently, by the extract, to rise, the patient seemed to be doing well and showed no bad effects, and as this rise did not show any tendency to increase, there appeared to be no indication to stop the administration of the extract, especially as such a rise was expected. However, at 9.30 P.M. the patient developed a temperature of 101.3° F.; pulse, 128, weak and intermittent, and in my temporary absence from town Dr. Starr was called, and found the patient in a condition of collapse; temperature, 102° F.; pulse, 140; respiration, 60, and panting, as though suffering from the effects of a ptomaïne poison. From this state the patient was rallied after considerable labor.

December 23d.—The patient recovered slowly from the attack of the previous night. She was very hysterical, with marked melancholia and hallucination of sight. She was also troubled greatly with flatulence and with dyspnœa. 9 A.M., temperature, 100° F.; pulse, 116. 4 P.M., temperature, 98.4° F.; pulse, 110. 7 P.M., temperature, 100.4° F.; pulse, 116.

The extract of thyroid was not again given until December 29th. In the interval the patient continued with but slight increase of muscular power, remaining, however, but little in bed, because there cumbent posture aggravated the dyspnœa and the hysterical excitement, as did also leaning the head back in a chair; and the patient slept for short intervals, leaning forward with her head resting upon the back of a chair placed in front of her. The temperature, taken by the mouth (subsequent to December 29th the temperature was taken in the axilla), ran

mostly normal, with the exception of the afternoon of the 26th, when from unknown cause it rose to 101° F., there being no other untoward symptom. The pulse ran from 98 to 116, and bore no relation to the temperature. Urine, 1.018 to 1.020, acid, cloudy with urates; albumin, from 7.5 gm. to 2 gm. to the litre; casts, abundant, hyaline, and granular. Average daily quantity was eighteen ounces.

December 29th.—8 A.M., temperature, 95.5° F. in axilla. Noon temperature, 97° F.; pulse, 88. 2.30 P.M., thyroid extract, five minims. 5.45 P.M., temperature, 97.6° F.; pulse, 94. 7.15 P.M., temperature, 98° F.

January 10, 1893.—The dose of the extract of thyroid had been gradually increased until this date. Twenty minims were given, ten at 10.30 A.M., and ten at 4.30 P.M. In addition to the extract, the iron with pepsin, and the strychnine had been continued, and sleep of from three to four hours, in short intervals at night, had been induced by morphine, by hyoscyamus, by Brown-Séquard mixture, or by codeine.

The swelling of the face, neck, and hands was very much less marked. The skin of the whole body was soft and moist, and the tendency to desquamation on the extremities had disappeared. The mental condition was somewhat improved. The feet and legs were much swollen with ordinary œdema, but the patient was somewhat stronger on her feet. Dysphagia for liquids had disappeared, but there was still some difficulty in swallowing solids. The patient could breathe through her nose more easily and she was quite delighted at the unusual satisfaction enjoyed when she "blew" her nose, a satisfaction not experienced in some years. The insomnia was not improved. Dyspnœa was still present, but not so constant, and the patient still lay down only upon her left side. 6.30 A.M., temperature, 97.4° F.; pulse, 88. 2 P.M., temperature, 98.4° F.; pulse, 100. 7.20 P.M., temperature, 98.4° F.; pulse, 100. Urine, 1.026, acid, clear; albumin, 4 gm. to the litre; urea, 27 gm. to the litre; casts, hyaline and granular; quantity, 16 ounces.

February 1st.—Twenty-five minims of the extract were now being given, thirteen at noon and twelve at 5 P.M. The swelling in the face, neck, clavicular regions, and hands were still further diminished. The skin was natural, and at night there was sensible perspiration about the neck and shoulders. The mental condition was improved, but the patient still had attacks of depression and hysteria toward evening. She felt stronger and sat up part of the day, dressed in corset and dress-waist. There was but little œdema of the legs and feet. She still required morphine at night, which induced about four hours' sleep at intervals, and a nap morning and evening. The appetite was improved. The patient had been out for a short drive. Flatulence still caused some distress. Dyspnœa occurred only in short attacks, and these not marked. Dysphagia were not present, the patient swallowing even solid food without difficulty. She was still unable to lie upon the right side. The swelling of the tongue and fauces was much diminished, and the patient could sing and even roll an "R," which latter she had been unable to accomplish since before her marriage. 3 A.M., temperature, 96.4° F.; pulse, 108. 7 A.M., temperature, 97.4° F.; pulse, 98. 4 P.M., temperature, 98.6° F.; pulse, 104. 7 P.M., temperature, 99.4° F.; pulse, 104. Urine, 1.020, acid, clear; albumin, 2 gm. to the litre; urea, 13 gm. to the litre; casts, very few, hyaline and granular; quantity, 35 ounces.

February 14th.—The patient was so far improved both mentally and physically as to make it desirable for her to return to her home in the suburbs.

March 29th.—10 A.M., temperature, 98.4° F.; pulse, 102. 9 P.M., temperature, 99.2° F.; pulse, 100. The patient had improved remarkably both in condition and in appearance. About two weeks ago she suffered some with an attack of pain and swelling in the ankles, considered to be rheumatic, and treated with salicylate of soda: this lasted a few days only, and during its continuance the patient felt much discouraged, but brightened up again as the pain disappeared. During this attack the temperature did not rise above 100° F.

May 1st.—About four months after beginning treatment the patient had reached twelve drops of the extract three times a day. Flint's chalybeate tablets were also given. The swelling was nowhere present. The skin over the whole body was smooth, soft, and with natural moisture, and on being rubbed became red. The face had a normal appearance, the hands were perfectly natural, and the patient can use them at sewing and fancy-work. The nipples were prominent. The arch of the eyebrow was normal. The patient was much stronger on her legs and she went about the house and grounds superintending house-cleaning and gardening. Her legs and arms were so much smaller than for some years as to excite the remark of both the patient and her friends. The abdomen was much smaller, and the patient found all her clothes were much too large for her. The hair was not falling out, and even new hair had begun to appear on the scalp, and what was somewhat distressing to the patient, quite a growth of fine but long hair was present on the sides of the face. Hair had also appeared in the axilla. The slight down which had always existed on the upper lip was not increased. The patient frequently went out driving, and was happy and cheerful with her family, but still had occasional periods of depression. There was no insomnia, the patient sleeping all night. The appetite was good, and there was no dysphagia. There was no dyspnœa, and the patient slept on either side, or upon the back, and could take a nap with her head thrown back in a chair; and while asleep the breathing was easy and without snoring. There was no pain in the ankles or wrists. The hearing was much improved, and she used the audiphone much less. She had some pain in the right side of the back, but at this time it had nearly disappeared. There was but little vesical irritation. Occasionally there was some pain under the left sterno-mastoid muscle. The patient had to bathe more frequently on account of the increased activity of the skin. No thyroid could be felt. Temperature ranged from 97.5° F., in the morning, to 98.5° F., occasionally 99° F., in the evening. Urine, 1.010, acid, clear; albumin, none—boiling, nitric acid, Esbach's, Millard's, and Tanret's tests; urea, 8 gm. to the litre; casts, occasional hyaline; quantity, 53 ounces.

May 4th.—On waking, the patient noticed a black spot before the left eye, and a feeling of fulness in the head. Examination showed a small hemorrhrge beneath the retina, near the central point. Nitro-glycerine, $\frac{1}{76}$ gr., was again begun, and the extract continued. This diagnosis and treatment were afterward verified and approved by Dr. Starr, whom I called in consultation three days later. At the present time the patient can be said to have no symptoms of myxœdema; she is gaining in strength daily, and is inclined to do too much. The temperature and urine remain as on May 1st.

A study of the urine in this case shows that during the first four weeks of the treatment, at the time when the general swelling was being most actively reduced by the extract, the daily amount of urea was increased; and that since then, the swelling being already much lessened, and what remained disappearing more slowly, the urea gradually diminished in amount: but even now it is somewhat greater than at the beginning of the treatment.

These facts suggest that the rise of temperature and pulse, noted at the beginning of the treatment, and culminating in the serious condition found upon December 22d, was due to the inability of the kidneys of this patient to properly care for the product of the suddenly increased tissue waste; and that in those cases where the kidneys are but little involved no bad effects, from even fairly large doses, need be feared. The quantity of urine has gradually increased, the albumin has entirely disappeared, and the casts, granular and hyaline, at first largely abundant, are now difficult to find. The amount of urates has largely diminished.

After about two weeks' treatment, then, positive improvement was shown, and at the end of four months the ordinary symptoms of the disease have disappeared, and the patient may be called cured, with the reservation that she still has atrophy of the thyroid and requires the continuance of the extract.

The extract, which has been, and still is being, used with such apparent success, in the case just described, and in six other cases, not under my personal care, is made from the thyroid glands taken from the sheep, and while still fresh, macerated with glycerine.

In the following description I limit the term gland to the thyroid on one side only, thus counting two glands to the sheep. About the location and general appearance of the thyroids little need be said as they do not differ materially from the same glands in man; but from their position they are most often destroyed in the process of "sticking" the sheep, and as the glands were unknown to the butchers, considerable difficulty was at first experienced in locating and obtaining them. Not more than ten to twelve hours elapse between the killing of the sheep and the completion of the extract. The glands are sent to me from the slaughter-house, attached to larynx and trachea, and covered by the muscles and fat of the region. This mass is thrown into a saturated solution of boric acid. From this point strict surgical asepsis is employed, with sterilized hands and instruments. The glands are removed, one by one, from the solution, and are roughly dissected upon a towel, from the surrouding tissues, and placed in a dish. Then, with freshly sterilized hands, instruments, towels, and dishes, the glands are cleaned carefully of their fatty and fibrous covering, and the vessels on the posterior surface, being traced deeply into the gland, are removed, so as to render the gland as free as possible of blood and fat. The glands are then weighed; and this weight varies enormously in apparently healthy glands, and somewhat with the age and size of the animal. I have, so far, used two hundred and sixty-three glands in the making of thyroid extract, the average weight of a gland being eighty-four grains, the lightest being only ten grains, the heaviest weighing seven hundred and twenty grains. Besides these, I have had some glands which were undoubtedly hypertrophied, one of which weighed, when cleaned, sixteen ounces avoirdupois. The glands, after being thus carefully cleaned and weighed, are cut up, each gland separately (to allow careful inspection), into a mortar. So far I have found simple retention cysts with broken-down cheesy contents, non-tubercular, and a general cystic degeneration, which latter is apparent before cutting into the gland. During this cutting up of the gland care is taken not to lose any of the "juice." After being cut up into the mortar, they are chopped very fine and macerated thoroughly with a pestle; then enough glycerine being added to cover the mass they are again macerated and the mixture poured off into a proper bottle. The rest of the glycerine is then added. The mortar, pestle, and all things connected with the operation are rendered sterile, preferably by heat, and if by heat, should be allowed to cool before using. The glycerine should be as anhydrous as possible, and therefore I use Schering's twice distilled, of a specific gravity of 1.260, and this is also sterilized by being kept at a temperature of 100° C. for one hour. I think now that a single sterilization is sufficient, though at first I subjected it to heat on two successsive days. The glands varying so enormously in their weight, the number used is not a sufficiently accurate basis to go upon in regulating the strength of the extract, and hence I have fixed upon an arbitrary standard of twenty-four grains of gland to one drachm of glycerine. The extract being completed, it is allowed to stand, with occasional agitations, for at least four days before being used, and should be kept away from the light and in a cool place. As required, any amount may then be filtered off through sterilized cotton, and will be ready for use. A safe beginning dose is five drops twice a day, and a maximum dose, to be gradually reached, seems to be fifteen drops three times a day, though larger doses have been given.

It having been suggested that the truly alarming condition of the patient on the night of December 22d was possibly due in fact to ptomaïne poisoning, samples of the extract and of the glycerine were given to Dr Alexander Lambert for bacteriological examination and investigation. The report which he kindly furnished me is herewith given:

"Koch,[1] in 1881, found that glycerine did not kill spores, moulds, or yeast, but that many bacteria in the vegetative condition were killed after a short exposure. As to the amount of glycerine necessary to prevent the growth of the ordinary putrefactive bacteria usually floating in the atmosphere, Miquel found that beef bouillon must contain at least 22.5 per cent. of glycerine, and that author placed glycerine among the feeble antiseptics, and found that in the above strength it was equal to 11.5 per cent. ammonium chloride, fifteen per cent. potassium iodide, 16.5 per cent. sodium chloride, twenty-five per cent. ammonium sulphate, and 27.5 per cent. sodium hyposulphite.

"In the first place, I made agar plates of a sample of commercial glycerine used in the preparation of the extract, and found that it contained a few living bacteria of various species not determined. I then tested three different specimens of thyroid extract, and found in the first two about the same number of living bacteria as in the commercial glycerine. The third specimen, which had been prepared with the sterilized glycerine, I found to be sterile. I also made a few simple experiments in regard to the germicidal power of glycerine on some pyogenic bacteria.

"The effect of pure glycerine on staphylococcus pyogenes aureus was to gradually kill the germ, so that at the end of ninety-six hours' exposure only a single colony developed, while under the same conditions at the beginning of the experiment four hundred and thirty-eight colonies had developed.

"Staphylococcus pyogenes epidermis albus was killed at the end of forty-eight hours' exposure to the pure glycerine, while under similar conditions eight hundred and fifty-four colonies had developed at the beginning of the experiment.

"Bacillus coli communis, obtained from a case of suppurative appendicitis, was also killed at the end of forty-eight hours' exposure to the pure glycerine, while under the same conditions five hundred and eighty-eight colonies had developed at the commencement of the experiment. I think it fair to conclude that glycerine possesses moderate germicidal properties, and is distinctly inhibitory to the growth of bacteria.

"ALEXANDER LAMBERT.

"2 EAST THIRTY-SEVENTH STREET."

The result of these investigations were sufficiently reassuring for me to begin again the administration of the same extract, using, however, smaller doses, and no further bad effects were noted.

From observations on my own case above reported, and from reports of the other cases being treated by the extracts I have made, I am of the belief that though no putrefactive changes occur in the glycerine extract, even after long standing, some change does take place in the essential ingredient contained in the extract, and upon which we depend for physiologigal results, which renders this "something" inert. Beneficial results have been obtained from one of my extracts which was three months old, but they were slowly developed. This deterioration in the extract is probably hastened by exposure to light and warmth, and hence I have advised its being kept in a cool and dark place. I believe if so kept it will retain all of its virtues for eight or ten weeks, but should not expect to obtain the best results from the use of a liquid preparation of much greater age than that.

[1] Koch: Ueber Desinfektion, Mittheilungen aus dem kaiserlichen Gesundheitsamte, vol. i., 1881, pp. 1-40.

In closing, I wish to express to Dr. T. Mitchell Prudden my sincere appreciation of the courteous assistance which he has so kindly extended to me.

152 West Fifty-seventh Street.

THE FREQUENCY OF THROAT DISEASES IN NEW YORK SCHOOL CHILDREN.[1]

By MARIA M. VINTON, A.M., M.D.,

NEW YORK

To anyone who has the opportunity of examining the throats of large numbers of children in New York City, it is very noticeable how few normal throats are to be found, as well as how much greater the percentage of enlarged tonsils and adenoid growths in the pharynx is among children than among adults. To the throat specialist this is doubtless very familiar, but for the benefit of those general practitioners who do not meet children in large numbers, I give the result of some observations made while acting as medical examiner to the "Tribune Fresh-Air Fund" during the past two years. The children sent to country-homes for a two weeks' outing by this fund are not, as many suppose, sick children. They are received for the most part into private families, and busy housewives could not take upon themselves the care of invalids. Besides this, one of the greatest difficulties in finding homes for them is the fear of their hosts that they may bring contagious diseases with them from the crowded tenement districts of New York. That this fear is far from groundless, is shown by the weekly reports of the Board of Health for the past two summers, which show from one to two hundred new cases each of measles, scarlatina, and diphtheria, to say nothing of occasional small-pox. Several children were offered last summer for inspection coming from a house which was at that time quarantined for small-pox. Accordingly each child is inspected by the medical examiner of the Fund within twenty-four hours of the time when he expects to leave the city, and each throat is carefully examined for possible evidences of contagious disease. In this way I have examined the throats of about sixteen thousand children under twelve years during the past two summers. These children come from the less prosperous classes of public-school children, but not from the lowest classes of the city, and are fair examples in health of the average school children.

During my first year of this work my attention was quickly drawn to the great number of enlarged tonsils that I met with, and to the frequency of adenoid growths in the oro-pharynx. I had no opportunity of examining the naso-pharynx or the larynx, the tongue depressor being the only instrument used. Nor did I attempt any statistics, as the work had to be done so rapidly that little time was left for observation. But during last summer I made notes of 550 cases with a view to finding out the percentage of normal throats. These cases were not selected for their rarity, but were simply average cases, taken just in the order in which they came, but inspected with more than my usual care, as time permitted me to record them.

A fact that was most evident was the variety of color to be observed in the mucous membrane of the throats on damp and on dry days. All the examinations were made in July and August, so that the climatic conditions were the best possible for the absence of diseases of the throat. On a dry day all the throats were of the normal pink or pale-red color. On a rainy day, or one of those humid days with which New Yorkers are so familiar, the normal pharynx assumed a bright red or even a purplish color, while abnormal ones were of a dark, angry red, which would lead one to suppose that an acute inflammation existed. At the same time there was a certain amount of apparent swelling of the tissues. Yet the children were not aware of any feeling of soreness in the throat. It soon became evident to me that the congestion varied with the amount of moisture in the air, and that the increased color was due entirely to that factor. A general practitioner may easily be misled by this deep coloration of the throat, found in damp weather, into the belief that an acute pharyngitis exists; I have even seen such cases subjected to treatment and pronounced cured when a change of weather relieved the congestion. On damp days there would also appear a few throats with deposits of thin white membrane on the tonsils. These were always detained in the city as a matter of precaution, and in twenty-four to forty-eight hours the deposits would be found to have disappeared, and no cases of scarlatina or diphtheria have as yet been exported to the country by "Tribune Fresh-Air Fund" children."

The commonest abnormal condition met with was that of adenoid vegetations in the oro-pharynx. I have called these adenoid growths purposely, although the books on throat diseases name this condition granular or chronic follicular pharyngitis. The pathological condition is precisely the same as that found in the vault of the pharynx, and there called adenoid vegetation or hypertrophy of the pharyngeal tonsil; indeed, where these growths exist in the oro-pharynx they are pretty good evidences that more of the same kind will be found higher up. I see no valid reason for a change of names in another region of the same cavity, simply separated from the naso-pharynx by an imaginary line, and by the fact that it can be easily seen when the patient opens his mouth without the use of a throat-mirror. The name chronic follicular pharyngitis is apt to produce confusion in the mind of the observer. The enlarged follicles are not mucous glands, nor is the mucous secretion increased, but, on the contrary, rather diminished. The enlargements consist of hypertrophied lymph-follicles, connected by a scanty amount of connective tissue, and associated with some general thickening of the pharyngeal mucous membrane. Thus it is of the same nature as the enlargements of the faucial and pharyngeal tonsils. The result of this hypertrophy is that there are seen scattered singly over the posterior wall of the pharynx, or aggregated in flattened masses, or in ridges behind the posterior pillars of the fauces, small swellings of a darker color than the surrounding mucous membrane. Strange to say, there are few symptoms resulting from these growths in children if confined to the oro-pharynx, as there is no increase of mucous secretion unless the pharyngeal tonsil is much affected. But the symptoms become very marked in adult life. As the child grows older a certain amount of atrophy occurs, and the condition is partly relieved, but the tissue remaining begins to produce very disagreeable results. There is constant hawking to remove mucus which does not exist, the feeling of a lump in the throat, a tickling sensation, a hacking cough which is a source of great annoyance and concern to the patient's friends, a tendency to irritation from slight causes, and dryness and rawness of the throat. No cases of this condition were noted unless somewhat marked in character. In some the increase of tissue was only to be found behind the posterior pillars in ridges, while in others the posterior wall was more or less covered with round elevations and flat patches of hypertrophy, which were evidently only the outlying borders of much larger deposits in the vault of the pharynx, as was shown by the child's inability to breathe through the nose and the flattening of the alæ nasi, which contributes to the stupid expression of the mouth-breather.

Next to the adenoid growths in frequency were enlargements of the tonsils of all sizes and varieties, from the soft, "worm-eaten," spongy tonsil to the hard, fibrous ones. In many children enlarged faucial tonsils coexisted with enlarged pharyngeal tonsils, and masses on the posterior wall of the oro-pharynx as might have been expected. On opening their mouths the tonsils were pressed inward by the stretching of the pillars of the fauces, and the whole throat seemed filled with the growths. In many there was a profuse discharge of mucus from the anterior

[1] Read before the Alumni Association of the Woman's Medical College of the New York Infirmary, April 12, 1893.

nares, showing implication of the turbinated structures, or the posterior wall of the pharynx was coated with stringy mucus difficult to remove and simulating a false membrane.

Of the 550 cases which were specially examined, and notes of which were made, only twenty per cent. showed normal throats. In sixty per cent. of the cases there were adenoid vegetations, in twenty per cent. enlarged tonsils, and in twelve per cent. both of these conditions existed.

How shall we account for the great prevalence of these hypertrophic affections in this city? We are constantly meeting hypertrophic rhinitis; abscesses in the ethmoidal and frontal sinuses, and in the antrum are far more common than in the more inland cities, while from the West we hear of the frequency of atrophic rhinitis. Is this not the result of the humidity of our climate? As I have mentioned above, on damp days with lowered barometric pressure there is a congestion of all the mucous membranes. Often repeated congestion leads to hypertrophy. Lymphatic tissues are more prone than others to increase of growth. The pharynx and nose are freely supplied with lymph-follicles. Here we have the whole process—humidity, lowered barometric pressure, congestion, hypertrophy of lymph-tissue, nasal obstruction, over-secretion of the mucous follicles, enlarged faucial and pharyngeal tonsils, granular pharyngitis—the catarrhal picture which we see so frequently.

The removal of enlarged tonsils, faucial and pharyngeal, in children by the tonsillitome and curette, or the galvanocautery, is the accepted treatment. Should we not also destroy the growths on the posterior wall of the oropharynx in childhood, thus avoiding the disagreeable symptoms coming on in adult life as singers' and clergymen's sore throat and chronic pharyngitis? As we cannot change the climate, this seems the only available means of prophylaxis. Astringents produce no effect on the lymphoid growths. Acids are objectionable from their tendency to spread where their action is not needed. Bosworth commends the use of the galvano-cautery after applying cocaine, when it is nearly painless. It has also the advantage that your little patient does not know that the point is hot, as it enters the mouth before the current is turned on. You can allow him to feel of the cold point and assure himself that there is no cutting to be done. I have found this method of treatment very successful in adults also.

I was surprised by the number of cases of divided uvula that I met with unaccompanied by cleft palate. These varied in degree from a double tip to a complete division up to the transverse fibres of the palate. Out of my five hundred and fifty cases four showed this condition, and a number of others were met with during the summer.

One child presented a very peculiar condition, resulting from an early attack of scarlatina. No tonsillar tissue was to be seen, this having been removed by abscess formation. The abscesses had perforated the anterior pillars of the fauces, leaving a hole the size of a three-cent piece on each side, which gave the effect of a festoon of mucous membrane on each side of the throat.

160 East Thirty-sixth Street.

A Diagnosis of Death from Lightning Stroke.—Four members of one family in Richmond, Va., were last summer found dead without known cause. Dr. W. H. Taylor concluded that they were struck by lightning, giving the following reasons: It has frequently occurred that when lightning has struck houses it has rendered steel and hard iron articles magnetic, so he made appropriate tests, and found the steel springs on which the four bodies were lying, the heater and the hinges on one of the windows all decidedly magnetic. Now, in the manufacture of articles it is possible that they may become magnetized, as electric motors are used in many manufacturing establishments; but were the heater magnetized during its manufacture, its usage would soon have destroyed the magnetism.—New York *Medical Times*.

THE FARADIC CURRENT IN GYNECOLOGY, WITH DESCRIPTION OF IMPROVED APPARATUS.[1]

By AUGUSTIN H. GOELET, M.D.,

NEW YORK

PRESIDENT OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION; MEMBER OF THE SOCIÉTÉ FRANÇAIS D'ELECTROTHÉRAPIE; FELLOW OF THE NEW YORK ACADEMY OF MEDICINE, AND NEW YORK OBSTETRICAL SOCIETY; GYNECOLOGIST TO THE WEST SIDE GERMAN CLINIC, ETC.

At the first annual meeting of the American Electro-therapeutic Association in 1891 I presented a paper embodying my view of the induced current, and suggested a combination of coils which from practical experience with this agent was considered particularly adapted to meet the requirements of gynecological work. Up to that time little attention had been paid to the construction of faradic apparatus, in this country at least. Every manufacturer wound his coils to suit his own peculiar ideas, regardless of the physiological effect of the current produced. Kidder was the only manufacturer who recognized the importance of the different qualities and therapeutic properties of the induced current as derived from different sizes and lengths of wire, and was the pioneer in this work. His apparatus was not, however, fully appreciated.

I am pleased to observe that my suggestions have been favorably considered by those directly interested in electro-therapeutics, and that the subject is receiving more serious consideration than before. I am gratified, also, to be able to state that the manufacturers are giving more attention to the details of the construction of their medical induction apparatus, and that three of the principal firms in this country are now making these combined coils and keep them regularly in stock. They differ somewhat in outward design, but the essential feature—the arrangement of the coils—is the same; and so far as is practicable, they give the same results.

The advantage of this combination of secondary coils is that the variations of the current to be derived therefrom render it universally useful in applying this agent (in this form) to a greater variety of conditions than was ever possible with the old forms of apparatus. The arrangement is such that the apparatus is adapted not only to gynecology, but to all classes of work where the induced current is employed. The importance of this subject will be more evident when I tell you that I believe this current to be of more practical value than the galvanic, and that it is not possible to obtain the desired results with the ordinary forms of faradic apparatus.

To appreciate the qualities of the secondary induced (faradic) current, it must be borne in mind that the character of this current is varied, both by the number of turns or convolutions of the wire in the secondary coil surrounding the primary (whence it is derived by inductive influence), and also by the greater or less resistance offered by the length of the wire which the current traverses—this resistance being greater the longer and finer the wire, and less the shorter and coarser the wire. That is, upon the variation of the two qualities, electromotive force and volume, depends the difference in its character and its therapeutic properties. The electromotive force is increased by multiplying the number of turns in the secondary coil, and is diminished by reducing the number of turns. At the same time that the number of turns are multiplied, the length of the wire the current must traverse is increased, and with it the resistance, and the volume of the current is consequently diminished. When a fewer number of turns of wire are employed there is less electro-motive force, and, as the resistance in the coil itself is decidedly less, the volume of the resulting current must be greater, and in consequence it is more stimulating. In order to make the volume of the current still more pronounced, a coarser wire which offers less resistance is employed. Therefore, the current from a coil of long, fine wire is a current of higher potential or greater electro-motive force and less volume than that derived from a coil of short, coarse

[1] Read before the New York County Medical Society, May 22, 1893.

wire, which gives a current of more volume and less electro-motive force, owing to the fewer number of turns.

The necessity of using a fine wire is not only on account of the increased resistance it offers and its modifying influence upon the volume of the current, but also because it allows more turns within a given space and brings the outer layers nearer the primary than would be possible if a coarse wire of the same length were used. It is important to have the outer layers as near as possible to the primary, thereby bringing them more certainly within the range of the lines of magnetic force.

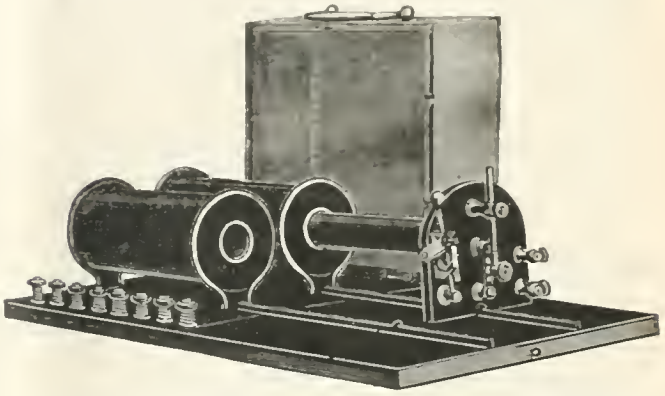
By increasing the electro-motive force or tension of the induced current in this manner, the volume becomes comparatively inappreciable, and a near approach to the static current is obtained. The high tension with inappreciable volume renders it capable of producing a sedative effect with a minimum degree of pain. That is, sedation effected in this manner is brought about by an intense stimulation of the sensory and motor filaments in which painful impressions are eliminated. Comparison with a drug like opium would be appropriate, which, though a cerebral stimulant, exerts a sedative influence. It is then, in order to be able to effect sedation by an intense stimulation which will be painless, that the electro-motive force of the current is increased and its volume is rendered inappreciable: since it is that quality, volume, which causes the stimulation to be exciting and painful. Hence, when sedation is desired, the current from a long, fine wire secondary coil is to be employed.

Even the best of the ordinary faradic batteries are not suitable for this purpose, because the current is harsh, irritating, and painful, owing to the comparatively short length of rather coarse wire used in the winding of the secondary coil. (Nos. 22, 26, or 30 wire of not more than 100 or 200 yards is ordinarily used.) The turns or windings are, therefore, few in number and the electro-motive force of the current is low. Consequently it is incapable of a sedative effect, though it may be useful for muscle stimulation. Another objectionable feature is that the secondary is immovably fixed over the primary, which prevents the current being started gradually unless a rheostat is employed, as the tube introduced between the primary and secondary does not completely suppress the current in the secondary.

A coil of No. 32 wire, six hundred or eight hundred yards in length, would give a current capable of sedation in some cases: but very frequently sensitive conditions are met which would be aggravated by it, and something better, or a higher tension current, is required. I therefore suggested a coil of No. 36 wire, fifteen hundred yards long, the current from which I have demonstrated by practical observation to be entirely satisfactory for the most sensitive conditions. But a point will be reached after a few applications when the current from this length of coil will cease to be appreciable to the patient; and when this is so at the beginning of an application it ceases to be beneficial, and the current must be made more stimulating. To accomplish this, a shorter length of wire or a fewer number of turns must be employed. Therefore I have had switches arranged so as to split up the coil into different lengths, each of which represents a different number of turns, and consequently gives a current of different electro-motive force. This arrangement avoids the substitution of a different spool whenever a change in the character of the current is required, which would unnecessarily encumber the apparatus.

The combination referred to above consists of four spools: one of No. 36 wire, fifteen hundred yards long; one of No. 32 wire, eight hundred yards long; one of No. 22 wire, two hundred and fifty yards long, and one of No. 18 wire, one hundred yards long. Now, the spool of No. 36 wire is tapped at one thousand yards and at five hundred yards, giving upon this spool three different coils or lengths of wire, viz., fifteen hundred yards, one thousand yards, and five hundred yards, which may be used separately. The spool of No. 32 wire is also tapped so as to allow three different lengths of wire to be utilized, viz., eight hundred yards, five hundred yards, and three hundred yards. By this arrangement, though there are only four spools, there are eight different coils, which may be employed separately. The advantage is that the stimulating properties of the current may be conveniently and gradually varied, so as to suit different conditions.

It is understood, of course, from what has been said above, that the current is rendered more stimulating by



shortening the length of wire in the coil or increasing the size of the wire, and consequently reducing the number of turns and the resistance. To be beneficial, the current must be appreciable, but never to the extent of producing pain; and whenever sedation is desired, a current must be employed which is agreeable to the patient. In very sensitive conditions the full length of the No. 36 wire is employed at the start; and when this ceases to be distinctly felt, either at the first sitting or subsequently, a more stimulating current is substituted. This is obtained by throwing out five hundred yards of the coil by means of the switch and using the length of one thousand yards. Likewise, when this current ceases to be appreciable, the length of the coil is reduced to five hundred yards. The coil of No. 32 wire is used in like manner when a still more stimulating current is desired.

Everything depends upon the sensitiveness of the particular case under consideration, and experience is necessary to determine just what coil can be employed to the best advantage. It is best, however, in most cases, to begin with the full length of the coil of No. 36 wire and diminish the length of the wire when the current becomes inappreciable, showing that more stimulation is demanded.

It is needless to say that the current must be turned off in every instance before this change is made, either by means of the rheostat controlling it or by removing the secondary from the primary.

The coil of No. 22 wire is not employed for the relief of pain. It gives an irritating current useful for stimulating relaxed supports and restoring lost tone, but produces painful muscular contraction. When it is understood that the current from this coil corresponds very nearly with that from batteries ordinarily sold for medical purposes, their limited usefulness and the utter folly of attempting to use them for the relief of pain will be appreciated.

The coil of No. 18 wire gives a current much more irritating than the one just described. It has a low electro motive force, but considerable volume, for which reason it produces exceedingly painful tetanic muscular contraction when rapidly interrupted. When slowly interrupted it is much more bearable, less irritating, and more effective for the purpose for which it is intended. It is employed in conditions of subinvolution of the uterus and vagina and for toning up impaired muscle-tissue. The interruptions should be from two to five per second. This allows alternate contraction and relaxation of the muscles, which closely imitates the normal physiological action, and may be regarded as an involuntary exercise. The applications should be of short duration, to avoid tiring out the muscles.

The frequency and regularity of the interruptions is quite an important consideration. With the fine wire coils for a sedative effect they must be rapid and even, and the note produced by the vibrator must be clear and distinct. The rate of interruptions which has been found most satisfactory in gynecological work is from three hundred to three hundred and fifty per second, determined by the number of vibrations in the note of the vibrator. It has been observed that when the frequency exceeded this, the current was inappreciable and inefficient. It has been claimed that a frequency of five hundred and forty per second gives the best results upon the external surface of the body; but I have found this to be not so in gynecological work, where the current is employed mostly with both poles in the vagina. The comparative insensitiveness of the vaginal mucous membrane and its exceedingly low resistance may be an explanation.

To obtain satisfactory results, the application for producing sedation must be prolonged to ten, fifteen, or twenty minutes, in order to secure complete relaxation and insensibility to the current. During the first four or five minutes the current is gradually increased until a desirable degree of stimulation is reached, and it is allowed to remain at this point throughout the remainder of the *séance*, which may terminate when complete local relaxation and insensibility is apparent. To stop short of this leaves the patient excited rather than soothed.

From four to five Leclanché cells are required for working with the long fine wire coils. These are connected in series, and, instead of throwing in one of the cells at a time to increase the force of the current, I employ a rheostat of German silver wire, which is placed in the circuit between the cells and the primary coil. The current from the secondary coil can be very nicely controlled in this manner, though it is better to have the secondary coils movable, unless a rheostat is employed in the secondary circuit. The introduction of a controlling rheostat in the battery circuit possesses the advantage of allowing the force of the generating current to be adjusted to suit the vibrator, thus securing regularity of action, and permits a constant, uniform force to be maintained as the cells deteriorate under use.

Some details of the application are essential. The vaginal bipolar method is preferred, because it allows the use of a stronger and consequently more effective current with less discomfort, and because the low resistance of the vaginal surface permits the qualities of the different currents to be better manifested. Concentration of the action upon the structures within the pelvis is likewise an important consideration. The diffusion of the current is greater than would be expected, and is generally sufficient, but when it is found to be inadequate, the vagino-abdominal or vagino-lumbar applications are to be substituted. In some instances the bipolar electrode in the uterus is more effective, or one pole in the uterus and the other on the abdomen or back.

The position of the electrode in the vagina or the uterus and the location of the poles are important. The extremity of the electrode is generally connected with the positive pole, so as to direct that pole against any localized tender or painful spot. The vaginal electrode should be constructed so that both metallic contact surfaces will be wholly within the vagina when it is properly adjusted in position, since it is important to avoid contact with the highly sensitive vulva orifice. Some electrodes made for this purpose are unfit for use, because contact with the vulva cannot be avoided.

The intra-uterine electrode should be pliable, to facilitate its introduction, and it should be no larger than an ordinary uterine sound. Both metallic surfaces must be within the uterine cavity, and contact with the internal os or cervical canal, which is frequently excessively sensitive, must be avoided. Some are made entirely too large, requiring previous dilation before they can be introduced, which is unjustifiable and injudicious.

The advantages of this current in gynecological work are too numerous to be mentioned in detail in the short time allotted me this evening. In a general way, it may be said to be particularly useful in subduing pelvic pain and removing congestion and tumefaction of the various disorders of the female pelvic organs; and I say, without hesitation, that it acts more promptly and gives greater satisfaction than any other remedy so far employed. Whether the pain be of neuralgic character or is due to chronic inflammatory conditions of the uterus and appendages, its subsidence is prompt and certain under the proper application of this current. It hastens the absorption of inflammatory deposits, overcomes congestion and tumefaction, and stimulates the evacuation of the uterus and tubes when the conditions are favorable for drainage through the natural channel. The first is brought about by its well-known effect upon capillary circulation, the latter by exciting contraction of the walls of the uterus and tubes. Many of these cases are, as you know, practically cured by removal of the congestion, and consequent tumefaction, since this condition is more frequently the barrier to free drainage of the tubal secretions into the uterine cavity than actual occlusion of the uterine end of the tube.

Its application as a therapeutic measure is perfectly simple, and it can be employed by the general practitioner as well as the specialist, if he will give proper attention to the technique of its application and use suitable apparatus. No special knowledge of electricity is required.

351 West Fifty-seventh Street, N. Y.

A CONTRIBUTION TO THE PATHOLOGY OF GARROTING.

A Case in Which the External Auditory Canal was Injured.[1]

By ADOLPH RUPP, M.D.,

NEW YORK.

The following case is reported because of its interest on at least two accounts. First, on account of injury to the external auditory canal caused by the patient in all probability having been garroted; second, the man being a diabetic, a rather deep and contused wound of the chin healed by first intention, though stitched up about twelve hours after the injury had been inflicted.[2]

Many lives, says Taylor,[3] have been destroyed by the employment of strangulation for purposes of robbery. Recovery or death in such cases depends on the lapse of a few seconds, more or less, during which constriction of the neck is continued. Garroting, besides inflicting serious local injury to the windpipe and the parts near to it, may cause insensibility, which may continue for some hours. The success with which the nastyman meets in the consummation of his part of the business depends much on a number of circumstances, chief among them being the size, strength, and general condition of the victim.

Why I believe my patient was garroted will appear from the following history of his case:

D. P—— is fifty years old. How long he has been a diabetic is not known; but during the last half year he has been losing flesh; has suffered somewhat from insomnia and sciatica. He recollects that he has suffered, off and on, more or less severely, from squamous eczema of the hands. By dieting and other well-enough-known therapeutic measures, his condition has become much im-

[1] Read at the meeting of the Society of the Alumni of Charity Hospital, January 4, 1893.

[2] With the exception of the clause in parentheses, the following description of garroting is taken from the Century Dictionary: "Garroting is the act of strangling a person, or compressing his windpipe until he becomes insensible (or compressing the throat in such a way and to such a degree as to make it impossible for the victim to cry for help, etc.), and practised especially in committing highway robbery. The crime is usually effected by three accomplices, called in England, the forestall, or the man who walks before the intended victim; the backstall, who walks behind the operator and victim; and the nastyman, the actual perpetrator of the crime. The purpose of the stalls is to conceal the crime, give alarm of danger, carry off the booty, and facilitate the escape of the nastyman."

[3] Revised ed. (1880), Taylor's Medical Jurisprudence, p. 467.

proved. My patient is a retired business man and fond of society. He is not a powerful man, and his height is about five feet and four inches. He is rather agile than otherwise.

Sometime ago he left his club a little after 11 P.M., and from that time to the time, one and a half hour later, when he was picked up from the sidewalk by a policeman, his recollection is blank. He was roused to consciousness, and it was found that his cash and his watch and chain were gone; but not his rings. I saw the patient about twelve hours after he reached his home. It was still evident that he had been a jolly good fellow; but he denied having drank to excess.

He complained of dizziness; but scarcely of any nausea, although he had vomited several hours before. He complained most of pain in his right ear; and that his throat had been cut. On being questioned, he said his throat hurt him somewhat when he swallowed; but when he chewed he had most discomfort and pain in his right ear. The throat pain was located in the upper portion just back of the tongue.

The cut of his throat was found to be a gaping wound about an inch and a half long, just under the chin, following its curve, and extended just a little more to the right than to the left of the median line. The anterior lip of the wound was curled into it. At the bottom of the wound, here and there, the muscles, of the chin could be seen. In the wound was clotted blood, and also the matted hair of the man's beard, but no other dirt or filth.

The right auricle was covered with dried blood, but did not bear any marks of direct violence. The right external auditory canal was filled with clotted blood; and, besides the ear pain already mentioned, he complained of a slight deafness, but not of tinnitus. There was no mastoid tenderness, nor was pain complained of when the auricle was pulled upward and backward; that is, the ear pain was not aggravated, all of which signs, to some extent, excluded tympanal implication. The parts in front of the tragus were swollen a little, and pressure there aggravated the ear pain complained of. The auricle and external auditory canal having been carefully and thoroughly cleaned, inspection showed that everything was in a normal condition, except that a small gouged-out-like ulcer, about one quarter of an inch long and half that in width, could be seen located just a little diagonally on the anterior inferior wall of the external auditory canal, and about two-fifths of an inch from the meatic orifice.

There were no visible signs of violence, such as might be caused by the rough use of the fingers and finger-nails, a rope or a band, anywhere on the throat or neck. He had a rather painful bump on the left upper and posterior parietal region; the outer dorsal surface of the left hand and forearm were abraded, contused, and painful; and the left knee, besides being swollen and contused on the outer anterior aspect, was painful enough to cause him to limp when he walked.

It appears to me from the foregoing detailed facts that the nastyman flung his left arm around his victim's neck, and accidentally (possibly intentionally) dug one of the fingers of his left hand into the semi-bemuddled victim's right external auditory canal (all this done behind the victim), thus getting more or less of a firm hold; and, now tightening his arm, pressure was exerted not so much against the laryngeal region as against the parts just above.

From all this it may be inferred that the nastyman was taller than his victim. By exerting the necessary pressure his finger slipped from its anchorage in the external auditory canal, and the finger-nail gouged out the ulcer that has been described, and, finally, the rifling finished, the nastyman, by way of adieu, untwining his left arm from around the victim's throat, gave him, almost simultaneously, a smart punch under the chin with his right fist, which caused the chin-wound, and sent the victim with considerable force forward and to the left side to the pavement, producing the remaining injuries that have been mentioned.[1]

Respecting the question of the relation of diabetes to wounds and injuries more need not be said than that this case in a measure substantiates the modern more hopeful view. However, the older grave view was not unfounded. It has been observed that the simplest wounds and injuries in diabetes have been succeeded by severe cellular inflammation and gangrene. And Fischer[2] mentions a diabetic who had been operated on for phimosis, gangrene of the genitals, abdomen, and thighs resulting therefrom.

The ulcer in the external auditory canal healed as well as might have been expected under ordinary circumstances: but this adventure aggravated the sciatica.

406 West Thirty-fourth Street.

AN OUNCE OF PREVENTION AS APPLIED TO PELVIC DISEASE.

By FRIEDA E. LIPPERT, M.D.,

NEW YORK.

The annual meeting of the American Gynecological Society during the past week, where "many men of many minds" came to listen with unflagging interest to the zealous discussion of old topics with constantly new phases, proves this specialty to be one of ever-growing proportions and importance. A personal review of the situation suggests one of two theories. Either pelvic disease with varying forms is, *per se*, on the increase, or the trained, intelligent attention is more alert in the recognition of these different forms.

In one of the addresses to the above Society, it was suggested that the idea of prevention of disease be more often discussed;[3] that the "how not to do" should receive attention as well as the "how to do." In pursuance of this thought, are submitted the following ideas for consideration.

An experience of some value among women of every possible grade of society has convinced me that an unfortunate disregard of the simplest physiological laws has much to do with an apparent increase of women's sufferings, and could the axe be used persistently to this root, much misery might be spared. Said Dr. Anna M. Fullerton, in an address to the alumnæ of the Woman's Medical College of Pennsylvania:[4] "It is in the education of women to the proper appreciation of physiological laws, and of the virtue and dignity of true wifehood and motherhood, that will be found the most powerful factor in a work of reform." Say, too, the appreciation of healthy wifehood and motherhood. There exists, among men and women alike, the densest ignorance of their physiological functions, and wherefore?

Great scientists, for years, have studied plant history, have classified and re-classified all the plant world from a study of its parts and functions. Why, then, can we not perceive that plant and animal life are alike fascinating, and that both hold the place of majestic octaves in Nature's harmonic scale? Lawson Tait,[5] it is, who so admirably urges: "Teach a child the life history of a flower, the functions of the anther, the stigma, the pollen, the ovary, and seed capsule; let her see the conjugation of the spirogyra, and the child will be armed with knowledge which will do much to prevent mischief, both moral and mental."

Again he says: "It must be ever regarded as misfortune that the most important functions of life—those of reproduction—have usually been shrouded in mystery and darkness."

[1] My friend, Dr. Rich. C. Newton, of Montclair, N. J., in the course of discussion said that he had given the question of garroting a good deal of attention at one time; and he suggested that the punch under the chin was probably the first, instead of the last, of the nastyman's manipulations.

[2] Handbuch der Allg. Operations und Instrumentenlehre. Geo. Fischer, Deutsche Chirurgie. Stuttgart: F. Enke, 1880, p. 23.

[3] From the address of the President of American Gynecological Society, Dr. Theophilus Parvin.

[4] Reprinted from the Annals of Gynecology for August, 1891.

[5] Tait: Diseases of Women and Abdominal Surgery.

In a series of lessons, or "health talks," to one of the Girls' Friendly Societies of New York, during the past winter, notwithstanding very varied mental calibre, explanations of the different physiological processes of life were understood and made entertaining. Beginning at the foundation, the girls were taught the structure and use of bones, their liability to injury and disease, to fracture and dislocation. Why, then, should not these girls be equally impressed with the importance of the uterus, ovaries, and tubes; their structure and use, their liability to injury and disease?

A recent text-book enumerates the following as among other causes "predisposing to disease of the generative organs:" "Neglect of exercise;"[1] "improprieties of dress," "imprudence during menstruation;" "marriage with existing uterine disease," "Induction of abortions." Study these singly and collectively, and what is the great first cause in each case? Ignorance, pure and simple; most pitiable to contemplate and harder than any of its resulting evils to overcome.

Take the factory-hand or shop-girl; she does not know that healthful exercise, in her precious leisure moments, rather than sensational reading or exciting pastime, will best meet the need for refreshment of her overtaxed body. Consequently, she falls a victim to jaded spirits, sluggish circulation, poor nutrition. Gradually, some menstrual disorder results, that is borne for successive months and years, without alleviation, through ignorance again, for the need of such.

On a higher plane, we meet the girl who, in conscientious effort to satisfy the demand for widening her mental horizon and its possibilities, either forgets that old maxim, "mens sana in corpore sano," or is unaware that her demand is best fulfilled by the symmetrical development of all her faculties. Thus she becomes the victim of retaliation from impoverished organs and a neglected system. She sows the seed of neuralgic dysmenorrhœa, irregular ovulation, or a train of hystero-neuroses.

On a different social elevation we find the young woman who is living in the attempt to satisfy society's imperative demands. Slavish customs enthrall her as her unhealthful modes of dress restrict her free play of bone and muscle. Injudicious excitement, unwise, unhygienic surroundings, and persistent dissipation during every menstrual period, constitute her *vis-a-tergo*, and ultimately she is speeding down the decline of nature.

Though suffering from the varying symptoms of endometritis, ovaritis, or salpingitis, blind to the fact of prognosis in her case, is it astonishing that after a few discouraging years of married life, she has the grievous burden of sterility and its attendant woes to bear?

On the other hand, an ignorance of the importance of her duty as a mother before that of the woman of society, may lead her to a thoughtless, yet none the less sinful, destruction of the young life already dependent upon hers. Perhaps repeated attempts to thus defraud nature occur, and she is made deservedly the sufferer from her own wrong-doing. She may pay quickly the penalty by the sudden termination of her wasted life, or become the life-long, bed-ridden creature of despairing years.

Never-ending theories are adduced for the "gradual physical deterioration of the human race." The subject is a fruitful one, upon which the social economist and the scientist alike, wax eloquent and enthusiastic.

When, however, mothers, teachers, and physicians unite to disperse the combined armies of ignorance, prejudice, and false modesty, the gradual amelioration of humanity will be gained step by step, round by round. Then disease need be no longer the everlasting inheritance "from generation to generation."

337 Second Avenue.

The Berlin Authorities have made an appropriation of $1,144,750 for the maintenance of the hospitals and arrangements for public hygiene for the current year.

[1] Thomas and Mundé: Practical Treatise on the Diseases of Women, sixth edition.

Progress of Medical Science.

Alterations in Intensity and Rhythm of Heart-Sounds.—In *L'Union Médicale* for January 5, 1893, are given some observations by Professor Potain upon the semeiological value of alterations in the rhythm and the intensity of heart-sounds. Such changes are frequent, existing in conditions of widely different nature, and that arise from various distinct causes. Speaking broadly, on the degree of the intensity of the heart-sounds depends the degree of force and energy of the systole. The stronger the contraction of the ventricle, the greater the energy of the left auriculo-ventricular valve: and the more abruptly the blood enters the aorta the more violently the arterial valves are closed. Yet a number of causes other than diminution of systolic energy produce variations in the intensity of heart-sounds. Thickening of the parietes of the heart or of the thorax, water or gas in the neighborhood of the heart, even the position of lung substance itself, may diminish sounds perceived during auscultation. Sometimes intensity is greatest at the apex, as when a portion of the lung greatly distended by emphysema is interposed between the base of the heart and the thoracic parietes. The closure of the aortic valve is accentuated in the beginning of Bright's disease, when there is aortic arterio-sclerosis. The pulmonary sound is more marked in emphysema, if there is an obstacle to the pulmonary circulation of gastro-hepatic origin, or of cardiac origin, as in mitral stenosis. Accentuation of the second pulmonary sound is one of the phases in the evolution of mitral stenosis, and is sometimes for a while the only sign upon which a diagnosis of this condition can be made. Great care should be taken, however, to exclude any other cause, as pulmonary spasm, etc., which produce similar increased intensity of sound.

Variations in rhythm are common, sometimes due to organic disease, often to gastro intestinal troubles, more frequently to intestinal disturbance, and not seldom have their origin in the use of digitalis. In the greater number of cardiac affections there is acceleration in all cardiac movements. There may be slowness of the beats; but this does not depend, as a general thing, upon organic lesions. And slowing of heart-movements is more apparent than real, the contractions being too feeble to induce arterial pulsation. This abortive systole is of great prognostic value, indicating always some aggravation of the patient's morbid condition. Increased frequency of beats may be accompanied by changes in the intervals between the heart-sounds. The intervals between the two sounds may come, in the course of time, to be equal. This is the "fœtal rhythm" that Huchard has brought so much into evidence of late. There may also be changes in the number of heart-sounds in various pathological conditions. Sometimes these sounds are heard in the cardiac cycle, sometimes one only, and sometimes four. If there is but one, it is the first sound which is absent, or which is too feeble to be perceived. This indicates great weakness of the heart. Usually there is absolute synchronism in the contractions of both sides of the heart. When this simultaneous action ceases, there is an increase in the sounds heard, a doubling of the heart-sounds. This doubling may be perfectly normal and simply physiological. Then it has special features that make it easily recognizable as a natural state which is peculiar to the individual. Under such circumstances it is closely connected with respiratory movements. Thus a physiological doubling of the second sound of the heart may occur at the close of inspiration and at the beginning of expiration; and a doubling of the first sound be produced at the close of expiration and at the beginning of inspiration. This doubling of the second sound has to do with the premature closure of the aortic valves, owing to increased tension of the blood in the aorta. This particular change in rhythm is due to purely mechanical causes, for numerous experiments definitely exclude reflex action, unequal contraction of each side of the heart,

transitory asphyxia, etc., as possible causes. A physiological doubling of the second sound alone is more rare. It may be the only sign of mitral stenosis without other phenomenon, either general or local. In this case the doubling of the second sound is quite independent of the respiratory movements, and is heard with every pulsation of the heart. When respiration is involved in this affection, there may exist a combination of the doublings of heart-sounds, and diagnosis thus becomes difficult. At the beginning of mitral stenosis the doubling has to do with the premature closure of the aortic valve; later the pulmonary valve closes first. Midway in the course of the disease there is no doubling at all, and there is only an accentuation of the second arterial sound. In the normal ventricular diastole the blood rapidly fills the cavity of the ventricle. But when the auriculo-ventricular orifice is narrowed, the cavity is less rapidly filled. The walls of the ventricle, being elastic, return to their natural shape after the systole and exert a powerful aspiratory influence upon the blood within the aorta, and hence the premature closure of the aortic valves As the obstacle to the intra-cardiac circulation increases, the pulmonary circulation becomes difficult and tension is increased in the pulmonary artery. Then the pulmonary valves close first. At one stage of the disease there is an equilibrium of these two phenomena and consequently no doubling, the only evidence of abnormity being the accentuation of the second sound of the heart. These are all-important points, since they indicate the degree of trouble that exists, a matter difficult to decide in the greater number of cardiac affections.

Rupture of the Spleen Due to Malaria.—Dr. Palmer describes the following case (*The Lancet*): The patient, aged twenty-six, was admitted into hospital on September 19th, having arrived the day before from the Danubian port Galatz, being a fireman on board a ship. He left the latter port on September 3d, in apparently good health, though he was drinking freely while on shore. He worked in the usual manner until September 12th, when he was suddenly seized with shivering and vomiting and had to go to his bunk, where he was treated by the captain with quinine. The shivering fits continued daily until he arrived at Liverpool on September 18th. He, however, felt better and went home in a cab from the ship; feeling worse the next day he applied to the hospital and was admitted. He was found on examination to be in a very weak condition, although he was able to walk. He was very anæmic, with marked pallor of mucous surfaces and slightly jaundiced complexion. He felt very cold. Temperature, 101.6° F.; extremities cold; tongue clean and moist. Heart: No murmur heard, but all sounds weak and distant. Apex beat not felt, best heard in the fifth space one inch inside the nipple line. Lungs: Breath-sounds normal. Abdomen: Slightly tympanitic over front. Splenic area of dulness considerably enlarged (eight inches vertical, five inches in the transverse diameter). No tenderness on palpation or percussion. Liver: Slightly enlarged. He says he has never had ague before. Five hours after admission the patient suddenly became very blanched, complaining of great pain over the abdomen. He was found to be lying on his left side, his legs drawn up, and quite collapsed. He could not move on account of pain. The left half of the abdomen was found to be absolutely dull as far as the middle line and extremely sensitive on percussion. Morphia was given, but he rapidly sank and died half an hour after the initial symptoms of collapse. At the autopsy a large collection of dark clot was found in the left flank, surrounding and quite hiding the spleen. On removing the spleen—which was done without any force, no adhesions being present—and the adherent clots, a ragged rent was seen to extend for three inches across the lower part of the anterior margin. The rent in the capsule, which was very thin, corresponded to the tear in the spleen substance itself, and there was no stripping away of capsule from surrounding spleen substance. The parenchyma was of lighter color than usual and very soft and diffluent. The spleen and clot weighed three pounds two ounces; the spleen separated from the clot weighed fourteen ounces. There is no doubt about the rarity of spontaneous rupture occurring so early in the disease. The evidence that the malaria had only existed for seven days is undoubted, and Dr. Palmer has not been able to find a case on record occurring so soon after the first evidence of malaria. Most of the observed cases have been where malaria was of some months' or years' standing, and generally preceded by muscular effort. Here, however, the patient was lying in bed at the time of rupture, and there is nothing to account for it except causes in the organ itself.

Splenectomy for Wandering Spleen.—At a late meeting of the Clinical Society of London (*The British Medical Journal*), Mr. Bland Sutton gave details of this case. The patient, a married woman, aged twenty-two, mother of one child, became aware of the existence of a swelling in the left half of the belly. In March she was seized with acute pain in the tumor, accompanied by vomiting and diarrhœa. On admission to the Middlesex Hospital, the tumor, which was very mobile, resembled hydronephrosis of a movable kidney, but the diagnosis was reduced to a hydatid cyst of the omentum or a wandering spleen. On March 21st an exploratory operation was undertaken, and the swelling proved to be a greatly enlarged spleen, with a twisted pedicle. The pedicle was untwisted, and the spleen returned to the left hypochondrium. The patient lost the pain, rapidly convalesced, and left the hospital wearing a carefully adjusted belt. Six weeks afterward the spleen was in its normal position, and apparently of proper size. On July 7th the patient came again to the hospital. The "lump" had appeared again, and she had been suddenly seized with acute abdominal pain, vomiting, diarrhœa, and hemorrhage from the vagina. The spleen on July 9th was in the right iliac fossa, in front of the cæcum; on July 10th it was in the left iliac fossa, resting on Poupart's ligament. On July 12th it was in the pelvis, its lower end resting on and doubling up the uterus. Splenectomy was performed on July 12th, the abdomen being opened through the scar of the first operation; the incision extended from the umbilicus to the symphysis pubis. The pedicle was twisted through three complete turns, and with its distended veins looked like a huge umbilical cord. The pedicle was transfixed, and tied in two halves with thin, strong plaited silk, and then encircled with a separate ligature for safety. The wound was closed in the usual manner. The patient was treated as after an ovariotomy, and recovered without the least drawback. The spleen weighed sixteen ounces, and, though of an unusual shape, was in texture quite natural.

Intestinal Disinfection in Some Forms of Acute Insanity.—A paper read by Dr. John Macpherson before the British Medical Association will be read with interest by those who find intestinal antisepsis valuable in certain nervous diseases. The author was inclined to criticise the too great employment of narcotics in asylums, often leading to the emaciation of the patient and the depression of his vitality. It was a matter of common knowledge that acute attacks were frequently averted by the simple exhibition of a purgative, for constipation undoubtedly tended to the exacerbation of the symptoms of acute mental disease, and an instantaneous, though perhaps temporary, improvement followed the relief of a loaded intestine. As pointed out by Brunton, nux vomica in small doses acted in some cases as a mild hypnotic; and Bell, in his work on the nervous system, had given notes of a case, among others, where a man was cured at once of a painful nervous affection by a simple purgative. We must not forget the depression accompanying hepatic derangement, nor that form of mental depression which we might describe as visceral. He pointed out that the acid of the gastric juice was primarily and chiefly antiseptic, and that

where this secretion was perverted, as in acute mental disease, its antiseptic power was diminished. The line of treatment he now advocated was the exhibition of antiseptics to remedy this defect. He selected a suitable case, washed out the stomach, and then gave a dose of calomel varying from two and a half to four grains at night, with a mild cathartic in the morning. This was followed by the exhibition of mild laxatives daily. On the second day naphthalin, in ten-grain doses, three times daily, was given between meals, gradually increasing the dose until eighty grains were administered during the twenty-four hours. He had never noted any harmful effect from these doses. The author gave details of cases illustrating the value of this method of treatment. During the treatment nitrogenous foods were eliminated as much as possible from the patient's dietary. In thirty acute cases thus treated there had been no apparent interference with the general health. The action of the drug in preventing and removing anæmia was very marked. The bodily weight increased steadily. The tendency of the skin to pigmentation in melancholia was checked, and the skin lost its dry appearance. The promotion of sleep, however, was one of the most gratifying results, for, when fully under the influence of naphthalin, the patients slept normally and naturally for seven or eight hours and the sleep was undoubtedly not narcotic. He considered the remedy of great value in acute melancholia. He pointed out that naphthalin had reduced the sulphates in the urine, and that the fæces of patients treated with it were devoid of smell was evidence of its antiseptic effects.—*New York Medical Journal.*

Clinical Department.

GANGRENOUS GINGIVITIS IN ADULTS.

By GEORGE D. BLEYTHING, M.D.,

NEW YORK.

In the Medical Record of April 15th Dr. G. A. Richards describes a case of gingivitis accompanied with general eruption.

I have a patient with asthma accompanying rheumatism and fatty heart who has twice exhibited the same symptoms while under treatment with iodide of potassium. As Dr. Richards' case was reported as under the same medication it may be an instance of a like unpleasant susceptibility to this drug.

My use of the iodide of potash was as a remedy for the rheumatism, and I hoped to promote a bronchial secretion at the same time that would relieve the difficult breathing.

After twenty-four hours' administration of the remedy the patient complained of sore gums and of a burning rash over her back and arms, with great dryness and constriction of the throat.

The gingivitis was so marked that I charged her with using mercurials without orders from me.

This she denied.

The burning pain of the eruption was so great that I was obliged to make use of hypodermic administration of morphia to allay it. The mouth was in a condition that almost precluded nourishment, the alveolar margin receding and becoming thickened and finally gangrenous.

The tops of the large hemorrhagic elevations on the body turned black and were so tender that dorsal decubitus was made intolerable.

A week had elapsed before I had ceased to be anxious as to the result, so great was the suffering from the pain and the depressed vitality.

A year later, when at a loss for a remedy for constantly recurring symptoms, I again essayed the treatment by iodide of potassium. This was done with hesitation and with caution, as the coincidence of the unpleasant state of the previous year and of the administration of this salt was in mind.

Ordering five grains once in four hours I was again confronted with the commencing gingivitis and hemorrhagic appearances on the body within twenty-four hours, four doses having been taken.

I was better prepared to meet this demonstration, and by forced nourishment and stimulation, with soothing washes to the mouth and hot sponging of the surface, cut short its career.

1008 Madison Avenue, April 20, 1893.

SCARLATINA IN THE NEWLY-BORN.

Report of Two Cases.

By JAMES McMANUS, M.D.,

ASSOCIATE ATTENDING PHYSICIAN TO NORWEGIAN HOSPITAL, BROOKLYN, N. Y.

Scarlatina in the newly-born is undeniably a rare affection. J. Lewis Smith says: "Infants under the age of six months do not ordinarily contract scarlet fever, although fully exposed, and those under four months nearly possess immunity."[1]

J. E. Atkinson, in Wood's "Reference Handbook," states: "New-born children are so subject to cutaneous and other disorders that may readily be taken for scarlatina that we may well demand the most definite testimony. Scientific exactness should require that a newly-born child must be proven either to have served as the medium of contagion for others, or to have developed characteristic symptoms in the midst of predisposing surroundings." Busey, in Keating's "Cyclopædia of the Diseases of Children,"[3] asserts that "during the first year the susceptibility is not very marked." Still Murchison's tables give a percentage of 6.7 of fatal cases under one year, occurring out of 1,483 cases, in England and Wales.

I might quote many other authors to prove that it is the general belief that scarlatina is a rare disease in the newly-born; but those cited are sufficient.

Last summer, I was engaged to attend Mrs. H—— in confinement. The baby expected was her third, the oldest being a boy four and a half years old; the second child was dead. A few days before her expected accouchement, she received word that her father was about to die, having met with an accident, and wanted to see her immediately in Hoboken, N. J. She went to see her dying father, and probably because of the intense excitement incident upon her sudden summons, she was delivered that night of a little daughter. This baby was delivered late on Saturday night. Everything went well with mother and child until the second Sunday (eight days) after the birth of the baby. Then the little girl was taken to the church to be christened, and was wrapped in a shawl, which her prospective godmother had brought for the purpose, from a house in which there were two children sick with scarlet fever.

The next Saturday I was called to attend the older boy at his home in Brooklyn. He was vomiting, feverish, and had a slight sore throat. I diagnosed probable commencing scarlet fever, when the mother called my attention to the baby. It was desquamating from scarlet fever. The mother said it had been restless, feverish, and had a red rash upon it; she had noticed the rash on Tuesday, but it had begun to be cross on Monday. She showed the baby to the doctor who was in attendance in Hoboken, but he did not pay any attention to it, and neighbors told her it was red gum, etc. The older boy had not been to Hoboken at all, and the baby had only returned the day before. Both children recovered, but the boy underwent a severe case with many complications.

A few weeks later I was called to attend Mrs. V—— in confinement. She also was delivered of a daughter. On account of her expected confinement she had sent her other two children away to their grandmother's, two weeks before.

[1] Diseases of Children, p. 270. Seventh edition.
[2] Vol. vi., p. 304.
[3] Vol. i., p. 559.

On the second day of her life the little one became restless and cried very much, and shortly a red rash came out; on the seventh day it began to desquamate. It had some fever, but that was slight.

During the second week the other children were brought home, through a misunderstanding, against the mother's wishes, and contrary to mine. In two and three days, respectively, the children became sick from scarlatina, the oldest—five years old—being first attacked, the other, three years old, coming next. One of them, the younger, died.

The mother had, while the children were away at their grandmother's, visited two houses in which scarlatina existed.

I think that these cases comply with Atkinson's demand for scientific exactness, etc. In the one case we have the history of a child wrapped in a shawl, taken from a house in which scarlatina was at that time present. The next day, the little one develops scarlet fever, desquamates on the sixth day, gives the disease on the fifth day to its brother, and goes through the disease in a typical manner. In the other there is a history of maternal exposure during the last two weeks of pregnancy, the development of the disease on the second day, desquamation on the seventh day of life, and others taking it from the baby the next week. The second baby recovered. For the second child I cannot find any source of contagion except the mother's exposure.

I report these cases because to me they are interesting; and they have also proven so to doctors whom I have told about them. They are instructive in showing the period of incubation, and in illustrating the belief that scarlatina in the newly-born is not so rare as the books would seem to teach us. To paraphrase Atkinson: Newly-born children are so subject to cutaneous and other disorders that scarlatina is often overlooked. This view probably explains why so many persons are apparently "immune" from scarlet fever, having had it shortly after birth without anyone being aware of it.

274 Ninth Street, Brooklyn.

THE INTERNAL USE OF HOT WATER IN THE TREATMENT OF DISEASE IN INFANTS.

By H. S. McCONNEL, M.D.,

New Brighton, Pa.

I was called one morning to see a three months old, bottle-fed child, and found it in convulsions. It was emaciated, and the convulsions were evidently due to the non-assimilation of its food. Previous to this, with the exception of a slight irritability of the stomach and bowels, it had appeared perfectly well to the parents. When the convulsion ceased, it commenced to vomit and purge. It could retain no kind of nourishment, not even cold water, and medicines did no good. As a last resort, I ordered all the hot water it would take, given through a nursing-bottle, and nothing else except a chloral and bromide mixture when the child was threatened with spasms, several of which it had since I was first called. This was continued for twenty-four hours without any nourishment, the surface being sponged every two hours with cold water. It vomited the first bottle of the hot water, but retained the second, and had the most peaceful sleep it had had for a long time. The condition of the bowels gradually improved, and vomiting gave very little trouble. At the end of another twenty-four hours a teaspoonful each of cream, lime water, and water was given every hour, then egg-water, and, finally, condensed milk. This was an extreme case, everyone expecting the child to die, yet it made a good recovery.

Another child, five months old, that had suffered from intestinal pain from birth, crying almost constantly unless it was nursing, had cried so long and loud one night that it had no voice in the morning, and the parents were almost frantic. It had some fever, the lungs were slightly congested, and the bowels were hard and tender. I ordered poultices and gave large doses of an opiate, but it cried on. It refused the breast, and did not like cold water. After a battle of ten hours, I had the parents get a nursing-bottle and fill the infant up with hot water. He took it as if this was the very thing he had been crying for; he took it eagerly and in large quantities, and it gave him almost instant relief. He took little else for thirty-six hours, and it was the most important article of diet for one week. Since that time the child has had an acute attack of vomiting and purging, and we resorted to the hot water, with the most happy effect.

Another child, five months old, that was well nourished, yet was crying all the time except when nursing, was given the hot water between the nursing periods, and the remedy cured it completely, after paregoric, etc., had failed to give relief.

The importance, in all gastric and intestinal troubles in adults, of rendering the entire alimentary canal aseptic, "making it sweet and clean," is now almost universally acknowledged, and the results from this method of treating these frequent and distressing diseases have been so satisfactory, that it determined me to apply it in similar affections in infants. Theoretically, nothing could be more rational, and practically the results have been beyond my most sanguine expectations. When a child is vomiting and purging, when its very life seems to be oozing away, there is an irresistible temptation to support life by giving nourishing food, yet experience has taught us that all food acts as an emetic or a purgative, and if it do not so act it is useless, the assimilative functions are all suspended, and secretions and excretions are perverted. Hot water here is a stimulant, an antiseptic, a sedative, and a food. Water will support life for a time, transfusion of saline solutions has rescued individuals from the grave, and if you will flush the stomach of the vomiting and purging infant with hot water for twenty-four hours, withholding all foods, and then, in small and easily digestible quantities, at short intervals, give nourishment, you will very often rescue it from the grave. I commence with pure hot water, then add salt, and, when necessary, sugar. One will be surprised to see how greedily the children drink it, preferring it to their nurse, and it will produce a quiet, peaceful sleep, and the extremities that were previously cold and clammy will become warm and natural. The above are only a few of the cases in which, and to which, it is adapted; in fact, there are few diseases of infancy in which the use of hot water will not prove a valuable aid. If my experience and remarks shall induce some to give hot water a fair, full, and impartial trial, I know what the verdict will be, and I shall consider I have not written in vain.

THE USE OF CARBOLIC ACID IN SOME AFFECTIONS OF THE EYE.

By G. HERBERT BURNHAM, M.D., F.R.C.S. Edin.,

Toronto, Can.

Since Professor Lister has said that he has returned to the use of carbolic acid as an antiseptic on account of its superiority, I now gain courage to affirm the same belief with respect to its position in ophthalmic diseases.

Some years ago I published a paper on the use of carbolic acid in the "Royal London Ophthalmic Hospital Reports," and later on in the *American Journal of Ophthalmology*. It was used with great success in gonorrhœal conjunctivitis and suppurative affections of the cornea of all kinds, in the strength of 1 in 20 and 1 in 40. Owing to the excessive praise lavished on newer remedies of the same character, I had dropped for some time its use. As above stated, however, I do now affirm that the results achieved with carbolic acid have been more satisfactory in every way than those got by any similar remedy. I, of course, am speaking of typical cases that test the respective merits of antiseptic remedies.

14 John Street.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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MICROBES AND LIGHT.

A SERIES of experiments has recently been conducted by Professor Marshall Ward, in relation to the effects of light on the bacillus of anthrax. A report on this subject has been published in *Nature*, and has given rise to some explanatory comments in a recent issue of the *British Medical Journal*. We are informed that Professor Marshall Ward's experiments appear to have been carried out with considerable care, and with a certain number of control experiments. His method of procedure was to inseminate gelatine or agar-agar with spores of bacillus anthracis, to pour the fluid medium into Petri's dishes and allow it to set to form a plate, then to fix a stencil-plate on the under surface of the dish and cover the whole (with the exception of the letter in the stencil-plate) with black paper; he then exposed the plate either directly or by means of a reflecting mirror to the action of December sunlight, so that the light could only act on the gelatine or agar-agar exposed through the stencil letter. Two of his plates, kept for eighteen hours in a drawer and then exposed for five hours, had colonies developed all over the surface, except on that part which had been exposed to the light through the letter, where the medium remained perfectly clear, giving sharply-marked letters in both cases. In this case, Professor Marshall Ward thinks, the spores were acted upon just at the time they were germinating, and therefore during their most tender period; so that they were killed off very perfectly and rapidly. In other cases the line of demarcation was not so distinctly seen, the margins of the letter and the spores there sown receiving reflected rays from the glass cover of the plate. The general result of his experiments was that the actinic rays of light, quite apart from the heat rays, act as germicidal agents.

A satisfactory demonstration of Ward's methods and results was made before the Fellows of the Royal Society, and should go far to establish the accuracy of his claims. Our British contemporary states that Marshall Ward's general results agree with those obtained by Downes and Blunt, and by Tyndall, the latter of whom, although he failed to prove that germs were destroyed by sunlight, was nevertheless able to show that their vitality was very markedly interfered with. In France, where this question has had considerable attention paid to it by Arloing, Nocard, Duclaux, Straus, Roux, and others, it has been proved most conclusively that light has a direct germicidal action, not only in the case of the anthrax bacillus, but also in that of various other species of micrococci and bacilli; and some years ago it was pointed out that light might be made to play a very important part in the attenuation of the virulence of anthrax vaccine. It has, however, been insisted on by some observers that the action of light is not altogether a direct one, but that light acts indirectly by altering the medium in which the organism is growing; and quite recently Duclaux has again returned to the attack on these lines, he holding that under the action of light there are developed in almost all the nutrient media with which we are in the habit of working, certain substances which, even when present in very small quantities, exert a very powerful germicidal influence.

The recent observations made by Koch on the action of direct sunlight in killing the tubercle bacillus, even in the space of a few minutes and regularly in two or three hours; Roux and Yersin's experiments on the action of light on the diphtheria bacillus; Buchner's, Janowski's, and Geisler's experiments on the typhoid fever bacillus, are all of very great interest, the two latter observers finding that the parts of the solar spectrum and the spectrum of diffused sunlight were far more active in preventing the growth of organisms, and determining their death, at the violet than at the red end, while Geisler has found that similar results might be obtained even when the electric light is used, especially with the violet rays of its spectrum. Of course, the more delicate experiments were done, as Tyndall's earlier experiments were, by noting the restraining action of light on the development of the various microbes used, rather than by determining the actual death of the organism. Another very important point recently demonstrated, but one often hinted at and even noted before, is that observed by Momont, who found that dry anthrax spores might be exposed with impunity to the action of light for a very considerable time, while moist spores exposed to sunlight for forty-eight hours in the presence of oxygen were so devitalized that they could not grow at all. Bacilli without spores, under similar conditions, were deprived of their vegetative activity by exposure to sunlight in from one to two hours, or even less, but in the absence of oxygen very long exposure—forty to fifty hours—was not sufficient to prevent them germinating when introduced into a suitable medium.

It is certainly a comforting reflection that the healthful effects of sunshine and sunlight are thus rationally explained, and can be scientifically demonstrated. This is only another instance where apparently abstruse science touches the eminently practical domain of every-day life. Sunshine, it would seem, may be relied upon where fumigation by sulphur would be too costly, cumbersome, and perhaps too ineffectual. One thing is certain, even if the sun cannot be utilized as a universal microbicide, sanitary authorities should be specially watchful of pestilences breeding in those neglected "dark corners," which unfortunately abound in all the large cities of the world. If we could have sunlight on tap, artificial germicides might be consigned to the lumber-room of things that have outlived their usefulness.

Free Clinical Material and new doctors are increasing yearly, and the profession is consuming itself at both ends.

BULLETINS AS A FORM OF ADVERTISING.

In England the advertising doctor is not held in high esteem by his less pushing confrères. An editorial writer in the *Medical Magazine* decries that common form of advertisement which makes its insidious appearance in the shape of a "bulletin." "An outcry is justly raised whenever a member of our profession is guilty of touting or advertising," says the journal named. "We wish that the leaders of our craft would seriously make an attempt to define the term advertisement. We doubt very much if the most ingenious among them could frame such a definition that it would include the class of cases to which the word generally applies, and would not embrace also those announcements which daily appear in the newspapers concerning the condition of health of this or that noble lord or lady. A code, strictly carried out on the basis of any definition, would make a clean sweep of the Fellows of both the Colleges. The worst of it is that the evil (if evil it be) is steadily growing. At one time we seldom heard the names of the medical attendants, except in the case of Royalty or of some extraordinarily distinguished man; but now we have every day details of how Mr. So-and-So, the local practitioner, called in Sir Somebody Something, the eminent specialist, in consultation on the case of Lord Tomnoddy or Mr. Titbury Snooks, M.P., together with particulars—often repulsive—of the disease from which either of those magnates might be suffering. There is hardly a day passes but that several such announcements appear in the columns of the newspapers. To such an extent has this system grown that, some time ago, it was reported that one aspiring physician paid a good round salary to two noble lords to be ill on alternate weeks throughout the season, and to send bulletins to the papers. This, of course, was a canard, but it suffices to show how the wind blows. If Mr. Poorbody, the struggling practitioner in a low neighborhood, sends an advertisement to the local paper that he has changed his residence, he (justly) runs the risk of ignominious expulsion from the profession. Why should consultants and fashionable doctors issue signed bulletins at all? Why should they set a bad example, only too readily followed by the smaller fry throughout the country. The signing of the bulletin serves no end except the gratification of an idle curiosity. If the family of the patient will, through snobbery or some other reason, themselves give these details, it may be necessary to submit, although we doubt very much if they would ever act in direct opposition to the wishes of the medical attendants. There are some Free Traders among us who boldly say: Why these restrictions at all? and who hold that it would be better for us to enter boldly into lists of commercial competition. Without in the least sympathizing with such views, we may maintain that the present system is unequal and unfair, and should be remedied by those who largely have it in their power, namely, the leaders of the profession."

Although written in England these views are not wholly inapplicable in our country. The anxiety of some doctors to keep out of the papers is only equalled by that of others to get into them. There is no good reason why those really qualified to speak on medical matters should withhold their views from the public, provided the subject be one of general public interest. On all such occasions, however, the physician who is interviewed should speak for his profession but not for himself. But to pander to the depraved taste of sensation lovers, by permitting or even seeking interviews on every possible and impossible occasion, for personal notoriety, is a decidedly reprehensible practice. So, too, the issue of bulletins should be strictly limited to cases in which the health of distinguished public characters is involved, and even then should be limited to as brief a statement as is compatible with clearness. Medical bulletins will be regarded as dignified and permissible announcements only so long as they are confined within such limits.

Our British contemporary goes too far in demanding their complete discontinuance. Newspapers are bound to supply such information to their readers as modern life calls for. It is better to have an authoritative statement from responsible physicians than the garbled reports which would otherwise take the place of such a document.

MICROBES IN DUST.

Dr. Manfredi has made an elaborate investigation of the dust of the streets of Naples. The number of microbes of all kinds he found on the average to be 761,521,000 per gramme. In those portions of the city under the best hygienic conditions, the average number of microbes was only 10,000,000 per gramme. In the busiest thoroughfares the average rose to 1,000,000,000, and in some of the dirtiest streets it rose to 5,000,000,000 per gramme. In this boundless ocean of life he found a large number of the pathogenic organisms, and the unhealthfulness of the street was in proportion to the number of microbes in the dust. He tested carefully the infective power of the dust, and obtained positive results in seventy-three per cent. of the experiments. Of forty-two cases in which he communicated disease to guinea-pigs by inoculating them with the dust of Naples, he found the microbe of pus in eight, the bacillus of malignant œdema in four, the bacillus of tetanus in two, the tubercle bacillus in three, besides several others which had the power of inducing fatal septicæmia in the guinea-pigs on which they were tried.

The dust of the city of New York should now be tested for microbes. There is reason to believe that a harvest as rich in variety and deadliness as was garnered in Naples could easily be secured. And yet people are surprised at our high death-rate.

THE LEGALITY OF KEEPING PRIVATE ASYLUMS.

A case has just been decided by the Supreme Court of California which will be of great interest to gentlemen who are keeping private institutions for the insane in this State. The court declares in the case of Whitwell that this business is a lawful one, which cannot be prohibited directly or indirectly.

The board of supervisors of San Mateo County, Cal., passed an ordinance March 10, 1892, to license, for purposes of regulation, the business of keeping asylums for the care of persons afflicted with insanity, inebriety, or other nervous diseases, which also provides that the board shall not grant a license to any person to conduct such

business. unless the walls of the asylum designated in his application are rendered fireproof by being constructed of brick and iron, or stone and iron, and the grounds accessible to patients are surrounded by a brick wall at least eighteen inches thick and twelve feet high, and the premises are distant more than four hundred yards from any dwelling-house or school-house; and has a further provision that no license issued by the board shall authorize male or female patients to be cared for in the same building. Dr. Whitwell was imprisoned for conducting an asylum comprehended in the ordinance, without securing a county license therefor. The case went up on a writ of habeas corpus.

The court ruled that the right to maintain an asylum cannot be prohibited or burdened with unjust or unreasonable conditions.

In this city the conductors of private institutions complain that they are burdened by unreasonable conditions, such as being compelled to exhibit their accounts, and to have assistants and attendants of a certain standard.

IPECACUANHA DE-EMETISATA.

Under the above rather cumbrous title Drs. A. A. Kauthack and A. Caddy describe (*The Practitioner*) a form of ipecac from which the emetine has been removed, and report the results of their experience with it in dysentery. Three years ago Surgeon-Major Harris, of Nazpur, suggested the use of this preparation and spoke favorably of its effects in dysentery. Dr. Prescott, of Bombay, used it successfully in six cases; but Dr. Walsh, of Bengal, was less fortunate, and he has even reached the conclusion that the emetine is the important constituent of ipecac in the therapeusis of acute dysentery. Dr. Walsh has devised a form of treatment of his own which he calls "rational," and which consists in the use of emetine combined chemically with biniodide of mercury. The de-emetized ipecac was used by Dr. Crombie in seven cases, and its administration was followed by improvement and recovery in six out of the seven. Improvement followed after an average treatment of 3.3 days. Drs. Kauthack and Caddy used the drug in sixteen cases, all being improved in three to five days, except one. It seems to be established that the drug does not cause much nausea. Its utility in acute dysentery is still not fully established. Certainly the ordinary method of using bismuth and opium with laxatives is a much more comfortable one.

Acidity of Diabetic Urine.—Dérignac says that in this disease, the total acidity increases with the proportion of sugar, with that of phosphoric acid and that of urea. It always increases at the moment of the appearance of attacks due to the presence of acetones. It constitutes them an important prognostic sign and permits the physician to foresee these attacks, and enables him to overcome them by appropriate therapeusis.—*Journal of Cutaneous and Genito-urinary Diseases.*

Cœliotomy has been adopted by several medical societies and by many American and English surgeons, also appears in the new text-book of surgery edited by Keen and White. It is by far the most suitable word to be applied to all anterior abdominal operations.—H. L. Staples, M.D., in the *Northwestern Lancet.*

News of the Week.

Memorial of Dr. E. T. Doubleday.—Death has for a second time invaded the ranks of the Hospital Graduates' Club and we desire to put on record a tribute to our late associate, Edwin T. Doubleday, M.D. As a founder, trustee, and active member the Club owes much to him for its existence, perpetuation, and success. As a comrade we found in him a genial, whole-souled companion, and as such mourn his death. As a physician we had in him an example of professional probity, skill, and kindness worthy of all emulation. He was generous, forbearing, hospitable, full of the manly attributes of public and the gentle qualities of private life. We desire in this official way to express our appreciation of his character, our sorrow, and to extend our heartfelt sympathy to his family in its bereavement. Nelson H. Henry, *President.* Jonathan Wright, Charles A. Powers, R. W. Amidon, *Committee of the Hospital Graduates' Club.*

Home for Incurables, Fordham, New York City.—The celebration of the Twenty-seventh Anniversary of the founding of this institution was held in the chapel of the Home, on Saturday, June 10th. The exercises consisted of reading the Annual Reports. addresses by Rev. G. R. Van De Water, D.D., and Mr. Amos P. Wilder, and were followed with a reception by the Board of Lady Managers.

The Society of the Alumni of Bellevue Hospital.—The following officers have been elected for the ensuing year: *President*, Dr. Frederick Holme Wiggin; *Vice-President.* Dr. C. C. Barrows; *Secretary*, Dr. William N. Hubbard: *Treasurer.* Dr. Robert J. Carlisle.

Surgeons' Fees in England.—Some rather interesting testimony concerning surgeons' fees in England was given in a suit which was tried in the London High Court a few days ago. Mr. Charles Keetley, the senior surgeon of the West London Hospital sued Professor Banister Fletcher for $2,000 for attendance upon the latter's son, who was badly hurt in the terrible railway disaster at Burgos some time ago. Professor Fletcher paid $500 into court, declaring that to be an adequate payment for the services rendered. Dr. Keetley. in his own behalf, testified that he thought $150 a day was a fair remuneration for his undivided attention. and that he would charge no less for a day's work in London. He received $75 a day whenever he attended court for an insurance company with which he was connected professionally. Mr. Alfred Cooper, F.R.C.S., consulting surgeon of the West London Hospital. said that in his opinion Mr. Keetley's charges were moderate in the extreme. For himself he should charge 400 guineas for a trip to Paris, and 30 or 40 guineas a day while he remained there. For going to Burgos he should charge 1,000 guineas. For bringing a patient home from Burgos and taking care of him during a three days' journey he should charge 500 guineas. For devoting his whole time to a patient in London he should not consider 8 guineas an hour an excessive charge. Other surgeons gave similar testimony, and finally the jury decided that Mr. Keetley was entitled to $1.750, a verdict that gave him a substantial victory.

Mississippi Valley Medical Association.—The next meeting of this association will be held at Indianapolis, October 4, 5 and 6, 1893. Those members who propose to read papers are requested to send the titles of the same to the Secretary, Dr. F. C. Woodburn, 399 College Avenue, Indianapolis, Ind.

Homœopathic Societies and Hospitals.—We are told that there are at the present time in the United States three National Homœopathic Societies, one Sectional Homœopathic Society, 30 State and 83 Local Homœopathic Medical Societies, and 30 Homœopathic Medical Clubs. There are 43 general and 45 special Homœopathic hospitals. Reports have been received from 38 general and 35 special Homœopathic hospitals; these 73 hospitals report a capacity of 6,047 beds; during the past year they have treated 39,373 patients; of these 29,637 have been cured, 4,154 have been relieved, 1,029 have not been relieved, 1,422 have died; the death-rate has been $3\frac{6.0}{100}$ per cent.; there are remaining in the hospitals 3,136 patients at the present time. There are 52 Homœopathic Dispensaries in the United States; of these reports have been received from 45, showing that these have treated during the past year 160,211 patients, and that 466,202 prescriptions have been made during that time; these dispensaries have also made 38,080 outside visits. All this seems to betoken prosperity and appreciation, yet much more is done in the regular hospitals and dispensaries of this city alone.

A Medical Strike.—The internes of the Cincinnati Hospital last week decided that they would refuse to testify before the coroner in the murder cases dying in the hospital. The causes which led to this action are numerous. The previous coroners made it a rule to call the internes to testify, and tried to arrange matters so as to take their testimony at once, thus preventing vexatious delays and keeping them away from their duties at the hospital as short a time as possible. Previous coroners have also given these gentlemen a fee of two dollars for their testimony. It seems that all this has been changed under the present administration; hence the rupture.

An Epidemic of Acute Bright's Disease occurred in the village of Oyonnax, France. Ten cases are reported by Dr. Ch. Fressinger, who does not think the disease the sequel of any abortive form of scarlatina.

The Tompkins County Medical Society held its annual meeting on May 31st. Professor James Law read a report upon cholera. Dr. Chauncey P. Biggs was elected President; Dr. Eugene Baker, Vice-President, and Dr. Jeanette M. Potter, Secretary.

A Life of the Late Sir Morell McKenzie has recently been written by Rev. Mr. Haweis. Just before its publication the family tried to suppress it, at the instance, it is supposed, of Empress Frederick, on account of alleged injudicious presentation of facts. The book appears, however.

The Association of Military Surgeons of the National Guard of the United States will hold its third annual meeting at Chicago, August 8, 9, and 10, 1893, under the presidency of Dr. N. Senn.

A Fever Annunciator.—The *Lancet's* Paris correspondent tells of an apparatus of recent invention for registering rises of temperature from friction in a machine, from fermentation in a mass of grain, etc. A small metallic bulb half filled with ether is sealed by a corrugated cover. When the temperature rises so as to expand the ether vapor sufficiently the cover is straightened out by the pressure and made to close an electric circuit that works a bell. It is said that the inventor, M. Tavernier, cherishes the project of fitting up hospital wards with these bulbs, each of which, secured in a patient's axilla, shall operate a numbered bell in the interne's room, after the manner of hotel annunciators. By this means, it is expected, a sudden and dangerous rise of temperature in any particular case may at once be brought to the interne's notice.

The American Association of Genito-urinary Surgeons will hold its seventh annual meeting at the Four Seasons Hotel, Harrogate, Tenn., on Tuesday and Wednesday, June 20th and 21st, under the presidency of Dr. Edward R. Palmer, of Louisville.

Sterilized Milk.—Mr. Nathan Strauss, who during the past winter maintained a depot for supplying coal in small quantities at cost price to the poor, has inaugurated another philanthropical project which will, no doubt, prove of inestimable value during the warm season. On June 1st he opened a depot at the foot of East Third Street, for the sale of pure milk and sterilized milk at cost price. The best quality of milk is offered for four cents a quart, and sterilized milk for six cents a quart. The latter is dispensed in bottles, for the return of which a small deposit is demanded. Cold milk is also supplied at one cent a glass. The present capacity of the depot is five hundred quarts daily of sterilized milk, and sixteen hundred quarts of ordinary milk, but the supply can be increased if necessary. All the milk is brought from Orange County, and the cows furnishing it have been carefully inspected by a veterinary detailed by the Health Department.

In Order to Encourage Graduates of Literary and Scientific Schools to undertake the study of Medicine the Chicago College of Physicians and Surgeons offers ten scholarships, each of which is valued at $100 a year for three years, to such applicants as present evidence of the best qualifications for medical study.

Graduates in France.—During the past year there were six hundred and thirty-five graduates of medicine in France, as against over four thousand in the United States.

A French Surgeon Wanted the Autopsy though he had cured the patient. Professor Gayet, of Lyons, was the surgeon. Having cured a man of an arterio-venous aneurism of the internal carotid artery and the cavernous sinus, and being desirous that this happy result should be verified after the death of the patient, he paid his patient a certain sum for having tattooed on his arm the following lugubrious words: "Anévrisme artério-veineux du sinus caverneux guéri; prière d'autopsier."

A Travelling Commission of Ophthalmologists.—The Society for Promoting the Welfare of the Blind in Russia, which is under the direct patronage of the Czarina, has arranged to send several young ophthalmic surgeons this summer in "flying columns" to various localities which are far removed from skilled assistance. They will do what they can toward the diminution of blindness, of

which there is a great deal in Russia, both by treating eye diseases, which if neglected might end in loss of sight, and also by operating on cases where it may be possible to restore sight by surgical means. The society is not at present possessed of sufficient means to carry out this excellent scheme, but it hopes by means of subscriptions to obtain pecuniary assistance for the purpose.

New Hampshire Medical Society.—The one hundred and second anniversary meeting will be held at Concord on Monday and Tuesday, June 19 and 20, 1893.

Dr. Archibald T. Douglas, formerly of Rondout, N. Y., died of cardiac disease, at his late residence, Groton, Conn., June 9th, aged sixty-nine. He was a prominent member of the State Medical Society of Connecticut, also of the State Medical Society of N. Y.; served as surgeon of a Connecticut regiment during the late war, and was an active and successful general practitioner for nearly forty years.

New York State Medical Association, Third District Branch.—The ninth annual meeting of the Third District Branch of the New York State Medical Association will be held at Elmira on Thursday, June 22d.

The Richmond City Hospital.—The Virginia Legislature has been petitioned to grant a charter to a new hospital in Richmond, to be called the Richmond City Hospital. It is to be under the same management as the College of Physicians and Surgeons in that city. The first president of the hospital corporation is Dr. Hunter McGuire.

American Medical Editors' Association.—The annual meeting of this Association was held in Milwaukee on Monday, June 5th, under the presidency of Dr. Culbertson, editor of the *Journal of the American Medical Association*. The president's address was on Medical Journalism. The speaker compared medical journals to post-graduate medical schools, as educators of practitioners. He dwelt at some length upon the question of advertisements, and said that no medical journal could live without advertising patronage. He did not approve of the advertising agent, but thought it would be better for advertisers to deal directly with the business management of the journal. In the discussion that followed the address, Dr. Wyle referred to journals published by drug houses, and thought that they were of no service to the profession. Dr. Hughes suggested that book reviews should be paid for as ordinary advertisements. Dr. Kauffman spoke of reading notices, and held that advertisers were entitled to receive the benefit of them.—The annual dinner of the Association took place in the evening, and at its conclusion, Mr. Ernest Hart, editor of the *British Medical Journal*, delivered an address. The medical editor, he said, should be sympathetic and magnanimous, yet should have a capacity for righteous indignation when occasion required. He should be rapid of initiative and prompt in decision. He should avoid the cultivation of a peculiar style, but should always be clear and grammatical in expression. He must necessarily be the subject of much criticism and could hardly avoid making enemies, but his care should be to incur no man's just hatred. Dr. Gould, of the *Medical News*, read a paper on medical orthography, in which he advocated the simplification of the spelling of many words by avoiding the use of diphthongs. The stupidest thing in the world, he said, is the conservatism that refuses all change, good or bad, simply from an unreasoning desire to maintain things as they are. The election of officers resulted in the choice of Dr. Hughes, of St. Louis, for president, and of Dr. Gould, of Philadelphia, for secretary.

American Medical Association.—The following officers of sections were elected at the Milwaukee meeting: *Laryngology and Otology.*—Chairman, E. Fletcher Ingals, Chicago; secretary, J. E. Fulton, St. Paul; executive committee, E. F. Ingals, Chicago; C. H. Burnett, Philadelphia; E. L. Shurley, Detroit. *Diseases of Children.*—Chairman, W. S. Christopher, Chicago; vice-chairman, F. A. Churchill, Chicago; secretary, F. S. Parsons, Northampton, Mass.; executive committee, William P. Watson, Jersey City; E. F. Brush, Mt. Vernon, N. Y.; C. G. Jennings, Detroit. *Dermatology and Syphilography.* — Chairman, A. H. Ohmann-Dumesnil, St. Louis; secretary, Louis F. Frank, Milwaukee; executive committee, A. Ravogli, Cincinnati; L. D. Bulkley, New York; L. A. Duhring, Philadelphia. *Ophthalmology.*—Chairman, A. R. Baker, Cleveland; vice-chairman, Secretary L. H. Taylor, Wilkesbarre. *Oral and Dental Surgery.*—Chairman, M. H. Fletcher, Cincinnati; secretary, Eugene S. Talbot, Chicago; executive committee, J. Taft, A. E. Baldwin, Cincinnati; John S. Marshall, Chicago. *Neurology and Medical Jurisprudence.*—Chairman, J. G. Kiernan, Chicago; vice-chairman, S. C. Gray, New York; secretary, F. P. Norbury, Jacksonville, Ill.; executive committee, O. E. Everts, Cincinnati; H. N. Moyer, Chicago; C. K. Mills, Philadelphia. *Surgery.*—Chairman, John B. Roberts, Philadelphia; vice-chairman, J. D. Griffiths, Kansas City; secretary, F. W. McRae, Atlanta. *Practice of Medicine.*—Chairman, H. A. Hare, Philadelphia; seecretary, W. H. Washburn, Milwaukee; executive committee, I. E. Atkinson, Philadelphia; N. S. Davis, Chicago; Charles G. Stockton, Buffalo. *Obstetrics and Diseases of Women.*—Chairman, Joseph Eastman, Indianapolis; secretary, George I. McKellvay, Philadelphia; executive committee, E. E. Montgomery, Philadelphia; J. Tabor Johnson, Washington, D. C.; J. Milton Duff, Pittsburg.

Pan-American Medical Congress.—The section on General Surgery extends a cordial invitation to all medical gentlemen engaged in the practice of surgery, as teachers or practitioners in any of its branches, to participate in all its meetings, and contribute papers for the general information. Such papers should conform to the requirements, as set forth in the general regulations of the Congress. In view of the wide extent of the constituency of the Congress, and the varied human environment necessarily under observation, it is suggested that the topic of endemic or surgical diseases prevalent in each country might fittingly receive a large share of attention from the members of this section; but carefully written papers upon any topic connected with surgical bacteriology, surgical pathology, or operative surgery of the regions, will be welcomed by the section. John B. Hamilton, M.D., executive president, Chicago, Ill.; John Ransohoff, M.D., English-speaking secretary, Cincinnati, O.; W. H. Heath, M.D., Spanish-speaking secretary, Buffalo, N. Y.

Society Reports.

American Medical Association.

Forty-fourth Annual Meeting, held in Milwaukee, Wis., June 6, 7, 8, and 9, 1893.

(Special Report by Telegraph to the MEDICAL RECORD.)

SECTION IN MEDICINE.

FIRST DAY, TUESDAY, JUNE 6TH.

Ulcerative Endocarditis.—The meeting of the section opened by the reading of a paper by the chairman (DR. CHARLES B. STOCKTON, of Buffalo), on "A Review of Ulcerative Endocarditis." The disease was to be considered in its relations to other endocardial inflammations. Since the notable lectures of Osler in 1885, we have really established a new category of endocardial inflammations. These are the result of a great variety of infectious agents, and we must give up the idea that all cases are simple in nature. We cannot say how the infecting agent gains access to the system, and we do not know just what it is, but bedside experience and the results of experiments upon animals alike prove (if we except the clearly rheumatic cases) that in endocarditis some morbific agent gains access to the heart.

As to the nature of rheumatism we are still in the dark. The reader regarded it as an infectious malady. Many cases of arthropathy classified under this head are really not rheumatic at all.

Again, the heart may suffer in Bright's disease and in gout. In the former there may be a development of ptomaines; in the latter a diminution of nitrogenous excretion, both of which act destructively upon the endocardium. In ulcerative endocarditis so-called, we may have either a cell proliferation with adhesion and contraction of valve-cusps, or else a softening and ulceration of the same with a development of infectious emboli. Hence, "ulcerative" is too limited a descriptive term and should be replaced by "malignant." The disease is undoubtedly of bacterial origin, but no pathogenic germ has been found to stand in an isolated causal relation to the affection. Weichselbaum. Fränckel, Gilbert, and Leon, have all contributed to our bacteriological knowledge along this line. The pnemococcus of Weichselbaum, the diplococcus of Friedländer, the bacillus coli communis have all been isolated from fatal cases. In certain instances the cusps show no ulcerations at all, but are covered with fungating vegetations. Taylor has suggested that certain germs localize their action on the initial valve and others on the aortic. Undoubtedly certain micro-organisms always cause vegetations while others may produce ulcerations.

Furthermore, the inflammation may begin either on the surface or in the substance of the valve-cusps, and the portions of cusp surface which are first brought into opposition by valvular closure are the site of the initial destructive process. This form of endocarditis occurs not infrequently on the right side of the heart, thus offering a marked contrast to the simple variety. Anaërobic germs would probably start up trouble here while the aërobic would be more apt to affect the left side.

The disease is doubtless overlooked or unrecognized. Some are regarded as pneumonia, a thing quite natural from physical signs when we have the right heart involved and casting off septic plugs which stop up the pulmonary vessels.

DR. J. G. TRUAX, of New York, had seen 13 cases of the malady, but in no instance was he able to make a diagnosis before autopsy. Most had occurred in connection with acute articular rheumatism. One was regarded as a pneumonia, 2 as typhoid fever, and 1 as acute mania. Owing to the great variability in symptoms such mistakes are very liable to occur. Cultures were made in all these cases. Tubercle bacilli were found in one case.

DR. DIDAMA, of Syracuse, suggested that perhaps the poison might be inhaled and hence go to the left side of the heart at once. Such a theory would account for the preponderance of the disease on the left side; but none of the various germs found in the disease respond to Koch's law in being found in every case of some one malady and in that alone.

DR. HERRICK, of Cleveland, regarded the disease as always secondary, and the pathological changes all due to alterations in the intestinal condition of the patient. If the blood is all right no germs whatever could cause the malady.

DR. MAX EINHORN, of New York, called attention to the fact that many germs might remain latent in the body for a long time and then become roused into activity and do harm. This would account for the fact that a large number of different germs, with well-defined characteristics, all seem here in endocarditis of a malignant nature to cause the same affection.

A paper on "The Complications of Chronic Bright's Disease and their Treatment," by S. C. DABNEY, M.D., of Charlottesville, Va., was read by title.

Venesection in Pneumonia.—DR. JOHN NORTH, of Toledo, O., read a paper entitled "To Bleed or Not to Bleed in Pneumonia." He commented on the fact that with all our knowledge regarding the pathology of this affection, our percentage of mortality was, if not increasing, at least not decreasing, from that of half a century ago. On the other hand, statistics were misleading, because formerly many cases of death from general senile failure were regarded as pneumonic, whereas the lung condition was one of hypostatic congestion. Cases of pneumonia in infants and children were now reported, but were not formerly. Moreover, the present practice of transferring very sick cases from house to hospital, while it had its humane aspect undoubtedly increased the mortality. The disease varies in severity according to locality, year, and season. Hence our statistics are unreliable because unclassified. Dr. North condemned unhesitatingly the practice of bleeding in this form of pulmonary disease. All of its good effects could be obtained (without the loss of this vital fluid) by ligation of the extremities, and by the exhibition of the proper drugs. The fallacy of statistics was evident when different writers drew from the same data conclusions diametrically opposite. As a result of the lung changes the efferent nerves of the sympathetic were practically cut or their action inhibited.

"Some Considerations Bearing on the Treatment of Pneumonia," was the title of a paper read by DR. W. H. WASHBURN, of Milwaukee. He stated that the mortality percentage had been on a gradual increase since 1832. Reliance was first placed on cathartics, emetics, and blisters. Since 1860 our treatment has been less active and heroic. Where there was cough, with high fever, it had seemed proper to exhibit opium, antipyretics and veratrum viride. Later had come the use of alcohol in large quantities, but there is still a mortality which cannot be accounted for on the theory of a change of type in the disease.

At present, said the reader, there are three distinct schools of therapeutics. The first advocates a return to the faith of the fathers. The second prefers the free use of remedies of the aconite-veratrum and tartar-emetic type. The third follows an expectant course, relying mainly on the external use of cold and liberal dosage with alcohol. The first two claim to be able to abort many cases of the disease.

Venesection has been thought to relieve rather by withdrawing a certain amount of tox-albumin from the system than by the relief of the heart by lowering the volume of the blood. Dr. Washburn regards the employment of the aconite group of drugs as illogical and unscientific. It does no good merely to reduce the pulse rate, and we usher the patient, seriously handicapped, into the third and critical stage. We must either destroy the germ or dilute the pneumotoxine, for the cardiac embarrassment is not of mechanical but of chemical origin.

In an ordinary pneumonia, when the crisis comes on or after the seventh day, there is a fall in pulse and tem-

perature, and yet the lung tissue is still solidified. The condition of the heart now is not due to a disease of its muscular fibre but rather to defective innervation. The two indications are to increase the nerve sensibility of the organ and to eliminate the pneumococcus poison. Free alcohol is not here our ideal remedy, as its effects are sedative and narcotic rather than stimulating. It is largely responsible for our present excessive mortality. Strychnine fulfils the two indications most admirably. It rouses the nervous system, and by its action on the muscular fibre of the bowel, and by its effect in increasing the flow of urine, largely assists in the elimination of the poison.

The two foregoing papers were considered together, and the discussion was opened by Dr. R. R. Ross, of Buffalo, who said that all cases of pneumonia can be divided into three classes according as the patient suffers the heart condition, the general disease poison, or engorged lungs. We must differentiate our cases, for each class demands its own distinct treatment. Where the heart is embarrassed we should dilate the vessels so as to ease it in its work as much as possible. He has for this purpose used nitroglycerine in a series of fifty cases with most satisfactory results.

Dr. Jenkins advocated the use of calomel. He had also used nitroglycerine alone and in combination with strychnine and digitalis. He would not give up alcohol entirely, as the condition of the stomach might lead to the rejection of all drugs. In the second stage he was partial to the ammonium salts. He did not believe in large doses of quinine for their antipyretic effect, as he had seen serious depression follow their use. The same objection obtained with the coal-tar products.

Dr. J. J. Reyburn, of Washington, D. C., advocated bleeding in stout, robust young patients, or at least he thought it might be of service, as also were aconite and veratrum, but in alcoholic and broken-down subjects the treatment must be distinctly supportive and stimulating from the start.

Dr. Batter, of Virginia, thought it necessary to give quinine when pneumonia occurred in malarial regions. Blood letting might reduce the amount of toxalbumin, but it also reduced the amount of oxygen. Pneumonia in the aged will bear enormous doses of alcohol. He believes it to be distinctly a bacillicide in its effects on the pneumococcus. Expectorants are useless. He pays special attention to ventilation, gives aconite or veratrum till the temperature falls, and then changes to potassium iodide and stimulants.

Dr. Porter, of Kansas City, Mo., said the disease is self-limited, and we should treat only its complications. We have no antidote to the poison which causes the pulmonary congestion. Alcohol is good in certain stages to tide the patient over the crisis. Strychnine also has great power to "bridge over" the critical stage.

Dr. Prime, of Chicago, preferred to classify the disease into sthenic and asthenic groups. In the former veratrum would slow the pulse and relax the arterioles. It must be given early in order to control the circulatory excitement, but again, no remedy, whether it be veratrum, strychnine, alcohol, or a salt of ammonium, should be given in a mere routine fashion.

Dr. Herrick, of Cleveland, thought that the entrance of the disease poison was often to be referred to an abnormal condition of the organs of digestion and assimilation. Pulmonary congestion always means abnormal physiological antecedents. Many cases result from the entrance of poison through the portal circulation from the bowels, thence to the right heart and lungs.

Dr. Scott, of Cleveland, thought that all cases of pulmonary congestion in pneumonia could not be referred to the influence of the pneumococcus. It might occur from the inhalation of smoke and hot air, as in firemen. We should treat the pathological condition by reducing the frequency of the pulse, which in turn would relieve the congestion. In selected cases bleeding is not unphilosophical.

Essentially the same view was also expressed by Dr. Martin, of New York.

Medical Aspects of Empyema.—An abstract of a paper by Dr. Robert H. Babcock, of Chicago, on this subject, was read by the Secretary. Dr. Babcock regards empyema as a far more common disease than is generally supposed. It is often overlooked when occurring with pneumonia, and a diagnosis of delayed resolution made. Clinical distinctions are based on the bacteriological relations of the different fluids found in the pleural cavities. These include the tubercle bacillus, the staphylococcus, pneumococcus, and streptococcus. The healthy pleura can resist the action of germs, but if it becomes injured mechanically or chemically in any way, or if its cavity holds an effusion to serve as a culture fluid, it succumbs. The amount of effusion is greater in primary and acute than in secondary and later cases. He distinguishes four varieties:

1. Metapneumonic empyema may come suddenly, a week or so after the initial disease, or insidiously. The pus may be absorbed or evacuated spontaneously. Encysted collections of fluid are common and the chill and sweating are not excessive.

2. There is a form due to streptococci and staphylococci. They differ only in degree and not in kind. The general course is that of a septic fever.

3. Tubercular empyema, acute or insidious. The fluid escapes slowly but persistently. Fever is generally absent.

4. Gangrenous empyema, which runs a true sapræmic course.

One physical sign is worthy of note in the metapneumonic variety. The upper line of dulness does not vary with a change in the position of the patient, nor is the "Ellis Line," of simple serous effusion, present.

The paper was discussed by Dr. W. A. Batchelor, of Milwaukee, Dr. Martine, of New York, and Dr. G. W. Webster, of Chicago. The latter advocated aspiration and washing out the cavity with a saturated solution of boric acid. In one case with cheesy pus he had introduced a solution of extractum pancreatis into the chest and allowed it to remain there three hours. On removal the pus was found to have become fluid and soft. He reported a series of 17 cases treated by aspiration and chest washing.

Second Day, Wednesday, June 7th.

Some Points on the Clinical History of Erysipelas was the title of a paper read by Dr. J. M. Anders, of Philadelphia. He gave an analysis of 2,010 cases of the disease as regarded various points. It was found that there was an increase with variable ratio in the number of cases from August to April (the maximum month), and then a rapid decrease from April to August. One-half of all cases occurred from February to May inclusive. For this fact no satisfactory explanation could be given, as the month of greatest sickness from all causes was not April but March. A combination of low barometric pressure with a mean relative humidity best favored the development of the disease. The temperature had the least, and the relative humidity the greatest, influence. The disease did not seem related to the seasons, as did chorea and rheumatism. Tracings illustrative of the foregoing facts were exhibited, showing for different years a similarity in the number of cases from January to September, but a dissimilarity in the number between September and the following January.

As regards age, out of 1,820 cases, 879 showed an average age of forty-three, 781 of twenty-nine, and 143 (in private practice) of twenty-nine and a half years. Of 787 cases, over one-half occurred before thirty. The greatest number was between twenty and thirty. Then came a slow decrease from thirty to fifty, and a rapid decrease after the latter year. In all these cases no distinction was made between the so-called "idiopathic" and "traumatic" forms. These terms were not now signifi-

cant, because we believe all cases to be due to a germ the channel of whose entrance we cannot always ascertain.

As to sex, of 1,787 cases 1,249 were males and 538 females. Of 143 cases in private practice, 85 were males and 58 females. These figures were contrary to those of most authors, who state that females are more liable to the disease. The channels of entrance of the disease germ were discoverable in 113 out of 643 cases examined with reference to this point. They included lesions of forehead, eyelids, and eyebrows, ears, nose, scalp, cheeks, thumb, and leg. In 304 cases a history of coryza; in 13 suggested lesions of the Schneiderian membrane as the channels of entrance of poison.

The occurrence of erysipelas in connection with chronic diseases was also considered.

Out of 1,665 cases, legalcus existed in 67; chronic Bright's and phthisis each in 15; rheumatism in 14; heart lesions in 10; urethral stricture in 6. In all, 7.8 per cent. occurred in connection with chronic disease.

As to individual predisposition, out of 439 cases, 39 had had one or more previous attacks. A family predisposition was noted in 3 or 4 cases.

In regard to the site of local manifestation, of 712 72.6 per cent. occurred on the face; 17.8 per cent. on the leg and foot; 2.3 per cent. on the arm; 1.1 per cent. on the hand; 0.7 per cent. on the scrotum. In many of these cases it was at once evident that the pre-existing local condition invited the infection. Out of 586 cases of the "idiopathic" variety 88.2 per cent. occurred on the face; 8.5 per cent. on the leg and foot; 1.7 per cent. on the arm; 0.85 per cent. on the hand; 0.68 per cent. on the scrotum.

The average duration in 1,880 cases was, including relapses, 25.1 days. Under forty years the duration was much less, averaging only fourteen days. Relapses occurred in 11.3 per cent. of all cases.

Dr. H. A. Hare, of Philadelphia, laid special stress on lesions of the buccal and nasal mucous membrane as resisting the germ, which was now regarded as identical with the ordinary streptococcus of pus. Males being more liable to all sorts of trauma were naturally more liable to the disease. He had seen it occur frequently after typhoid fever, attended with much sordes on the teeth, fissuring of the tongue, and crusts in the nose. In examining such statistics as had been given, care should be taken to get at, not so much the average age of all cases as to determine the number of cases occurring at each of the periods of life.

Gastrodiaphany.—Dr. Max Einhorn, of New York, gave a demonstration of gastrodiaphany on two patients, and read an outline paper upon the topic. The procedure is really a translumination of the stomach. A soft rubber stomach-tube is passed, in the end of which is a small Edison lamp connected with a battery, with the usual current interrupter at the proximal end of the tube. The latter should be lubricated with glycerine, and previous to its passage the patient should drink a glass of water. On making the connection the stomach appears as an illuminated dome. Counter-pressure on the abdominal wall increases the brightening of the zone of illumination. The zone is seen to descend in forcible inspiration as the stomach is pushed down by the diaphragm. This procedure will reveal the presence of gastroptosis, dilatation tumors, and thickening. No accident has ever occurred. The glass of the lamp should of course be very thick.

Dr. John Auld, of Philadelphia, made some remarks upon the subject, calling attention to the fact that age would have some influence upon the vividness of the zone.

Sunstroke.—Dr. Joseph Eichberg, of Cincinnati, read a paper entitled "Sunstroke, with Considerations of its Treatment." The paper was a *résumé* of the writer's hospital experience with the disease in Cincinnati during the heated terms of 1890 and 1892. The two indications for treatment are to reduce temperature by external cold and to keep up cardiac force and arterial tone. For the latter purpose hypodermatic employment of digitalis and strychnia at the earliest possible moment after the attack offer promising results. The first injection should be given even before the patient is bathed. The full, bounding pulse of the early stage is due to relaxed arterioles and not to an over-forcible heart. The action of the latter is, in fact, actually weakened, and this is due both to the contact of the muscles with superheated blood and to cerebral influences. The muscular coats of the arterioles show the same evidence of the chemically altered blood acting first as an irritant, and then as a depressant causing low arterial tone. The patient should be placed in a cold bath, to which ice is added, so that the temperature is kept at as nearly 55° F. as possible. The bath not only extracts heat but rouses the nervous system.

Out of 76 cases treated, 74 were males and 2 females. Both the latter were cases of heat prostration rather than of true sunstroke; 3 were colored, and all recovered. Most of the cases had been subjected to out-door exposure previous to the attack. Twenty-five per cent. only were of native extraction. Of the foreigners the Germans were most numerous. Nearly all were drinkers, mostly of beer.

As regards the temperature, 20 showed a temperature of 109° F. or over, with 7 deaths. Between 107° and 109° F., 19 cases, with 2 deaths; between 105° and 107° F., 7 cases, no deaths; between 102° and 105° F., 13 cases, with 2 deaths, both of the latter occurring from a secondary meningitis on the fourth and fifth days respectively. In all there were, excluding one case having lobar pneumonia on admission to hospital, 12 deaths. All the fatal cases developed convulsions, with contracted pupils and embarrassed respiration.

In drug administration the usual rules here fail. Large doses must be given. The duration of the bath rarely exceeded twenty minutes. A beer-drinker is a bad subject, as he usually has an excess of fat and a fatty heart. The body-fat keeps in the internal heat, and also as well interferes with the tonic effect of the cold bath on the relaxed peripheral vessels.

A paper on the same topic was also read by Dr. R. R. Ross, of Buffalo. After giving an outline description of the disease he alluded to the cases treated at the New York Presbyterian Hospital during 1891–92. Dr. Ross deprecates the use of the ice-cold bath. It causes shock, and contracts the capillaries, thus defeating its own aim. His cases numbered 33, with 4 deaths. They were placed in a bath of 45° to 50° F. for three minutes, then removed and rubbed with coarse towels for a short time, then bathed and rubbed again till the temperature was down to 102° F. Care should be taken to cool the head as rapidly as the rest of the body. The heart action was maintained by injections of sulphuric ether, strychnine, and atropine.

After the bath there often comes a reaction in course of an hour or so. Here the bath need be only 80° F., as this secondary fever is much more amenable to treatment. The after-diet should be distinctly not heating. A saline cathartic is advisable, and in convulsive cases bleeding may be serviceable.

In regard to after-effects he had been able to follow 18 cases, some of which were included in those with high temperatures. All were found at the expiration of nearly a year to be in good health, except one patient who suffered from headache. One or two cases of intolerance to heat were developed. No evidences of brain or cord inflammations were found. Unfavorable sequelæ were more referable to late treatment than to anything else.

Dr. Hare, of Philadelphia, thought the danger in these cases was due to organic changes in the vital nerve-centres, and not to a mere combustion of body tissues. The cold bath was the essence of therapeusis here, and during its continuance energetic friction should be maintained. Cold injections into the colon are often just as serviceable as baths. He does not lay much stress on digitalis in these cases, as it is well known that the drug frequently fails to act in the presence of high temperatures.

Dr. J. W. Putnam, of Buffalo, had observed melan-

cholia following one case of sunstroke within a year, and in another case, a marked intolerance to liquor in the person of a man who had formerly been able to use large quantities of alcohol without being apparently much affected thereby.

The topic was also discussed by Drs. Whiting and Jones, of Ohio.

Diabetes Mellitus.—Dr. N. S. Davis, Jr., of Chicago, read a paper on the treatment of diabetes. He thinks that patients are sometimes placed too quickly on anti-diabetic diet. As a result there ensues depression, both mental and physical. He has seen two cases in which this sudden restriction led to diminution of urine, mental depression, physical malaise, and diabetic coma with fatal result. The patient should be gradually educated up to the necessary dietetic limitation, at least a week being spent in the process. If the patient can eat a potato daily without any increase in the sugar excreted, and if its withdrawal has no effect on its amount, he should be allowed to continue with it. A little bread can generally be allowed, and wheat bread is preferable to the gluten product, as most specimens of the latter are impure and contain starch. Maccaroni in moderation is generally allowable.

In regard to drugs antipyrine, so warmly commended by Germain-Sée, has proven in his own experience practically valueless. Some cases have been benefited thereby, but it gives no uniformly good results. His preference is for Clemen's solution of bromine and arsenic, which since 1885 he has employed in nearly two hundred cases. Its mode of action is unknown. Arsenic is supposed to affect the glycogenic function of the liver and to increase the oxygenation of tissue, but there is no experimental proof that Clemen's solution does this. In some cases of diabetes occurring in patients with previous renal affection, with dilated glomeruli and arterial sclerosis in the kidney, the solution, while improving the general symptoms, has not lessened the renal flow. The dosage should be begun with three drops after meals, gradually increased to ten or fifteen. An average dose is eight drops. Too large doses (even five drops) at the outset may cause diminution of urine, but at the same time considerable depression.

As annoyances in the use of the remedy he has seen œdema about the eyes, conjunctivitis, pharyngitis, and nausea, though the latter can generally be avoided by free dilution in water. A slow tolerance should be established. Codeine and morphine in large doses will also lessen sugar, but there are, of course, objections to this plan of treatment. Three cases responded well to arseniate of strychnine, with accompanying dietetic restrictions.

Dr. Davis has also used the pancreatic preparations, but without positive proof of their value apart from diet. Essence of pancreas has been employed for this purpose. Reference was made to the reports of Neville, Wood, Hale, White, and other English writers on the effects of employing pancreas tissue itself and liquor pancreaticus. He has been disappointed in ergot. It has shown no effect on the glycosuria, and but little on the polyuria.

Fatty Diarrhœa in Diabetes.—Dr. H. H. Didama, of Syracuse, reported a case of fatty diarrhœa suggesting pancreatic trouble, when an examination of the urine showed the presence of considerable sugar. The case was benefited, but not cured, by the use of arsenic combined with bromide of sodium.

Headache was the title of a paper read by Dr. James W. Putnam, of Buffalo. Headache is to be regarded merely as a symptom, evidencing instability (often hereditary) of the nervous system. He excluded from his paper all consideration of migraine, which he thought should be regarded as a separate affection. In treating a case we should first ascertain the history of the initial headache, its character as to intermittency, periodicity, and duration. We should also study the location of the pain. Then we may properly classify the cases. Anæmic headaches are best treated by diffusible stimulants such as aromatic spirits of ammonia. Quinine will benefit some.

Congestive headache often occurs in those of a neuropathic ancestry, also in school children. It should carefully be watched in the latter, as it may be the first danger signal of an oncoming tubercular meningitis. Careful attention must be paid to hygiene and all over-fatigue avoided. In adults congestive headache most frequently results from gastro-intestinal disturbance, and is best relieved by a blue pill and a saline cathartic. In brain-workers rest should be strictly enjoined. A cup of black coffee may be given on rising, to be followed by a spinal douche at 40° F. for fifteen or twenty seconds. Nux vomica and dilute phosphoric acid, in elixir of gentian or pepsin, are valuable adjuvants. Digitalis is indicated where heart action is week. A cold sponge-bath on retiring, followed one hour later, if sleep does not come, by ergot and potassium bromide, complete the treatment in this class of cases.

Syphilitic cases do best, of course, on the iodide. The increase of pain at night, with painful scalp, gives a clew to diagnosis in these cases. Reflex headaches are often due to eye strain, but do not always disappear even when the ocular defects are fully corrected by the proper glasses.

Dr. J. J. Whitaker, of Cincinnati, doubted whether glasses would correct headaches. Headache in the adult often suggests commencing renal mischief. An examination of the urine shows an increased quantity, with diminished specific gravity. In syphilis the pain is generally due to gummatous deposits.

Dr. Whitaker also alluded to one variety of headache occurring in gonorrhœa when the posterior urethra was involved. There is generally no discharge, but much anxiety and nervousness; in short, the condition known as hysteria virilis. We should examine for the gonorrhœal threads (trippe täden) in the morning urine. Treating the case by deep injections of silver nitrate solutions will cure the urethritis and relieve the headache.

Basedow's Disease.—Dr. E. D. Ferguson, of Troy, N. Y., read a paper entitled "An Additional Note on the Treatment of Exophthalmic Goitre." He regards strophanthus as by far the most useful remedy in this malady, though not considering it as a specific. He has used it alone, also in combination with iron, arsenic, and strychnine. He prefers the tincture in eight to ten drop doses after meals. If no benefit is experienced in the course of a week, it should be increased one or two drops daily. No injurious effects have been noted in nearly thirty cases, though the dose has reached as high as fifty drops after each meal. The patient should be supplied with a large quantity of the tincture at the outset, so as not to have to change the preparation after. On commencing with a new preparation it is advisable to start with a little below the maximum dose.

Slow Pulse.—Dr. Ferguson also exhibited sphygmograpic tracings from an interesting case of bradycardia, where the pulse-rate was as low as twelve per minute. The patient only complained of headache caused by aural vertigo; no valvular murmur could be heard, but he believed there was obstruction somewhere in the aorta.

Dr. H. A. Hare, of Philadelphia, believed that while we saw much tachycardia we saw very little true Graves's disease. In his hands strophanthus was of little use. He had had better results with belladonna, digitalis, and nitro-glycerine. A troublesome diarrhœa often occurred with strophanthus after it had been used even in moderate dosage for three or four days.

Dr. J. M. Anders, of Philadelphia, prefers a combination of digitalis and strophanthus, especially where we have marked arhythmia with tachycardia.

Dr. Quine, of Chicago, believes that much tachycardia which we meet is really immature Graves's disease. He prefers general sedatives, as physostigma and gelsemium. Belladonna is capricious and uncertain. Cannabis and viburnum are often of great service.

The Sending of Patients to Health-Resorts by Life Insurance Companies.—Dr. Charles Denison, of Denver, Col., read a paper entitled "The Mutual Interest of the Medical Profession and Insurance Companies in the Prolongation of Human Life." It was a plea for a system whereby persons insured should be sent, at the expense of companies in which they may hold policies, to a suitable climate in case they develop phthisis. The company's benefit will result from the fact that their prolonged lives will enable them to continue their payment of premiums. The paper was discussed by Drs. Whitaker, of Cincinnati, Herrick and Scott, of Cleveland. The subject was considered so important that the paper was referred to a special committee to report thereon at a later meeting of the Section.

The Treatment of Cholera.—A paper on this subject was read by Dr. John H. Hollister, of Chicago. He alluded to the work of Cantani, of Naples, and gave a brief review of the different plans of treatment now in vogue. Opium should be discarded. Preference must be given to mineral acids, as the comma bacillus cannot thrive in an acid medium. Sulphuric-acid lemonade is beneficial at the outset. Thymol, salol, and corrosive sublimate are all of distinct value. Injections into the bowel of tannic acid, 3 j to v., in O. iv. water at 68° to 70° F. offer most promising results. He believes also that there is a great future in store for anti-choleraic vaccination.

Tuberculin.—Dr. J. J. Whitaker, of Cincinnati, read a paper on this subject. He gave a review of the modifications made in this remedy and its employment since its introduction two years or more ago. Many of the phenomena in phthisis are due, not to the tubercle bacillus alone, but rather to the complicating streptococcus septicæmia. Tuberculin is good for the cases of pure phthisis and not for the streptococcic features of the malady. He uses it extensively for purposes of diagnosis in doubtful cases.

The paper was discussed by Dr. Charles Denison, of Denver, who related his experience with Klebs's tuberculocidin.

AMERICAN PEDIATRIC SOCIETY.

Fifth Annual Meeting, held at Cranston's Hotel, West Point, N. Y., May 24, 25, and 26, 1893.

(Concluded from p. 698.)

Second Day, Thursday, May 25th—Evening Session.

The members of the American Pediatric Society were invited to go to West Point in corpore, by Colonel H. I. Ernst, Superintendent of the United States Military Academy, and they witnessed a very interesting sham battle by the cadets.

After enjoying a dinner, the meeting was opened by the President, Dr. Blackader, of Montreal.

Discussion on the Treatment of Pertussis, by Dr. J. P. Crozer Griffith, of Philadelphia, Pa.

1. *Local.*—After mentioning a great many disastrous results of many drugs, he was greatly perplexed at recommending anything good. He believed to have seen good results from a local spray of carbolic acid. He further recommended spray of resorcine.

2. *Constitutional*, by Dr. F. Forchheimer, of Cincinnati. He mentioned the fact that sixty-two remedies were recommended by Barthez and Daune. He believed children should be kept away from everything coming in contact with expectorated material from a child sick with pertussis, for as long as a child coughs it may become the centre of infection. The author published a paper in 1882 (*American Journal of Obstetrics*), in which he said that the ideal treatment is: 1, a positive effect on the duration of the disease; 2, an effect on the paroxysms; 3, prevention of sequelæ and complications; 4, reduction in mortality; 5, prophylactic properties. He finally believed belladonna and quinine to be ideal drugs, although Henoch did not have good results from quinine.

Climatic Treatment.—Dr. Osler, of Baltimore, read a short paper on "Climatic Treatment." His main points were that disinfection can best be accomplished by means of fresh air.

Complications of Pertussis, by Dr. Henry D. Chapin, of New York. He dwelt on the importance of understanding complications to prevent them during their progress, owing to their fatality. There are four varieties of complications: Pulmonary, gastro-intestinal, nervous, constitutional. Most common is bronchitis, pulmonary collapse. The tubes become choked during expiration, as a result air is forced out by the side of this mucus, which is drawn into a narrower lumen of the bronchial tube by each respiration. Collapse is produced by air being expelled, none taken in.

Catarrhal pneumonia is not different pathologically from ordinary pneumonia, except it is more fatal. Enlargement of tracheo-bronchial glands, marginal emphysema, and a deformity of the chest from deficient inspiration in non-rachitic children.

Gastro-intestinal mucous membrane shows in congested state vomiting and diarrhœa—latter very grave in summer. Hernia is also very frequently met with.

Nervous eclampsia during, or shortly after, paroxysms. Congestion of venous sinus, meningeal apoplexy, laryngismus stridulus.

Constitutional. All exanthemata, more particularly measles, unusually susceptible to tuberculosis.

A child three and one-half years of age, good family history, no pulmonary lesion; no lesion until it contracted pertussis. During decline of pertussis was brought in contact with a man having phthisis and cavity with expectoration. Examination of lung negative. Expectoration showed tubercle bacilli, there being an undoubted case of infection from the adult.

Dr. Koplik stated a very interesting case in which he found albumin in the urine.

Dr. Holt mentioned antipyrine and belladonna, which he used in practice, but preferred the former drug.

Dr. Fruitnight, of New York, referred to bromoform, which was first recommended in New York by your correspondent. The article appeared in the Medical Record, September 6, 1890.

Dr. Joseph Winters, of New York, believed that we lose more cases of pertussis than diphtheria. He advocated the use of codeine, one-twelfth grain, every two hours, repeated every few hours, for a child two years of age. He also used counter-irritation and regulated diet. He believes that by judicious treatment the sequelæ and complications can be avoided.

Dr. Northrup mentioned the post-mortem examination of a serious case in which pulmonary emphysema was present.

Dr. Seibert, of New York, used the carbolic spray formerly, he now advocated quinine with fresh air.

Dr. August Caillé, of New York, formulated his treatment by first carefully disinfecting, by means of irrigation, the whole naso-pharynx, believing this to be the infecting focus. He had used antipyrine at night with good results. He also referred to the use of ozone in its nascent state, which was advocated by him last year at this Society, and which had given excellent results. His instrument was demonstrated last year and explained in detail.

Dr. J. Lewis Smith, of New York, advocated resorcine as the most successful remedy in his hands.

The Treatment of Constipation in Early Infancy.—Discussion—1. *Dietetics*, by L. Emmett Holt, M.D.

He believes that everything is regulated by the quantity of fat present. He advocates cream as an excellent adjunct in management of constipation.

Dr. Yale mentioned the benefits of placing the children on a very low vessel. He believes in the efficacy of a suppository of glycerine or otherwise.

Dr. Putnam's paper was read by Dr. I. S. Adams, of Washington, D. C. He believed that constipation should be relieved when symptoms arise from the obstruction.

A rule that the bowels must move once in twenty-four hours is wrong. Rheum seems to be the favorite drug with this writer. He also mentions phosphate of soda, senna, and pulv. liquoricea comp.

Dr. Starr, of Philadelphia, in discussing the last paper mentioned the benefit he derived from a suppository containing aloes, belladonna, and cocoa-butter.

Dr. Fruitnight mentioned the efficacy of water in the treatment of constipation.

Dr. Crandall, of New York, also discussed the paper.

Third Day, Friday, May 26th—Morning Session.

The Chairman, Dr. Blackader, opened the business meeting, after which the first paper read was by Dr. Henry D. Chapin, New York, entitled, "The Preservation of Cow's Milk." He had tried bismuth-naphthol hydrate, and believed it to be a good intestinal antiseptic. He next showed specimens of milk to which peroxide of hydrogen had been added, and which had been very well preserved by it. He further demonstrated a specimen of patented condensed milk, which had been introduced in our market recently. He emphasized the fact that in spite of protest we very frequently have children in our dispensaries who seem to thrive on a diet of condensed cream, and that exclusively.

Dr. Seibert, of New York, believed peroxide of hydrogen should be discarded, owing to the fact that we have bacteria in milk against which the peroxide is powerless. He emphasized experiments conducted by him wherein he immersed a bit of diphtheritic membrane, at various intervals of from ten to thirty minutes, in the solution of peroxide of hydrogen without any effect on the micro-organisms.

Dr. Rotch, of Boston, believed it was better to have a good raw material than to modify a bad milk by adding peroxide, as suggested by Dr. Chapin. He stated that the centrifuging apparatus separated all contamination, bacteria, and dirt. Regarding patent foods, he was distinctly opposed to the idea of using them when good milk, properly diluted from distinct recipes, as to the quantity of fat, cream, etc., could be obtained for each baby.

Dr. Koplik, in discussing the paper, stated that the reason our milk in New York is sterilized at 80° C., instead of Pasteurizing as recommended at 67° C., is owing to the quality being poorer than milk obtained in Boston.

Gastric Neurosis in Childhood, by Irving M. Snow, of Buffalo, N. Y., was the next paper, in which the author related his experience and gave the clinical history of a carefully examined patient.

Dr. L. Emmett Holt, of New York, in discussing this paper, stated the relation of uric acid to urea was about 1 to 40 during the intervals, during attacks it was about one-third of the normal relation of 1 to 40, or about 1 to 150, *i.e.*, 1 = uric acid; 150 = urea.

He recommended a dietetic treatment, absence of sugar, and use of starches. He believed the symptoms appeared to be associated with the elimination of uric acid.

Dr. Christopher, of Chicago, related a case of neurosis in an adult in which the uric-acid relationship was the same as mentioned in the case of Dr. Holt.

Dr. Rotch believed in chloral per rectum to tide over the attack; he had no faith in dietetic treatment.

Dr. Seibert said that if this case were referred to Ewald he believed he would call it not gastric neurosis but rather hyperacidity of the stomach.

Dr. Forchheimer believed the urine could clear the diagnosis.

Dr. August Caillé, of New York, in discussing this paper, said in a case of this kind under his care he had found bile in the vomit during the attack—bile in the urine after the attack. He associated these attacks rather with a faulty chemistry of the liver.

Etiology of Incontinence of Urine, by B. K. Rachford, of Newport, Ky., was the next paper. He believed incontinence to be a neurosis, not weakness of the sphincter vesical. Anæmia, reflex irritation, is only a factor accompanying other chronic conditions. The precursors of incontinence he believed to be the tubercular, rheumatic, malarial, and syphilitic conditions. He divided the cause into three divisions: 1st, Excitability of nervous centres by heredity or age; 2d, anæmia; 3d, reflex irritation.

The discussion was opened by Dr. Crandall, and continued by Drs. Adams, Christopher, and Griffith.

Meningitis complicating Pneumonia, by Dr. L. Emmett Holt, of New York, was the next paper read. The author carefully reviewed cases of meningitis occurring in pneumonia clinically, and also gave the result of post-mortem examination.

A Clinical Study of Rheumatism in Children, by Dr. Floyd M. Crandall, of New York City. A very interesting paper, giving the result of examinations of children suffering with rheumatism, special care being taken in regard to their cardiac complication.

Treatment of Certain Forms of Anæmia in Children, by Dr. F. Forchheimer, of Cincinnati, O. The conclusions arrived at by the author were: 1. In the anæmia of children the hæmoglobin suffers greater reduction than the red corpuscles. 2. If the hæmoglobin can be increased this will produce an increase in the number of red blood-corpuscles. 3. Hæmoglobin, having its principal origin in the intestine, can be increased by the internal administration of various remedies having for their action, *a*, an antiseptic effect, preventing in this manner the destruction of the precursors of hæmoglobin; *b*, a direct supply of hæmoglobin from blood or blood products; *c*, to a certain extent of iron compounds.

Some Points in Connection with the Etiology of Rachitis, by Dr. J. Lewis Smith, of New York, was read by title.

Treatment of Rachitis with the Lactophosphate of Lime, by Dr. J. Henry Fruitnight, of New York. He referred to the diminished (fifty per cent. normal) condition of lime in bone. Some cases were not the result of deficiency of lime in bones. They were the result of a depraved or a general perverted nutrition. Physiologically established, lime is a regenerator of bone. As phosphate of lime is insoluble he uses lactophosphate of lime, ʒ j. doses, three or four times daily, for a long period, or until the rachitic symptoms are overcome. The reaction of lactic acid on phosphate of lime produces a substance readily soluble in all proportions of water and gastric juice.

There were but eight cases narrated, five of which were attended in hospital and three in private practice. The author obtained good results in all eight cases. Due attention was given to improve the hygienic surroundings and special attention given to food.

Report of Five Cases of Tetany, by Dr. J. P. Crozer Griffith, of Philadelphia, was next read by title.

Afternoon Session.

A Case of Erysipelas of the Scalp and Face in an Infant Aged Six Weeks; Recovery.—Dr. Samuel S. Adams, of Washington, described a very interesting case in which a chill and all other constitutional symptoms appeared five days before flush and œdema.

Dr. Holt, in discussion, emphasized the fact that constitutional symptoms usually precede the local symptoms.

Dr. Seibert, in discussing, mentioned the good results he had obtained from scarification by means of clean needles.

Dr. F. Huber, of New York, described a case of abscess of lung in an infant, aged thirteen and a half months. Operation; recovery. During second week of illness cough became paroxysmal, a needle introduced gave about ʒ jss. of pus; a peculiarity was when a drop of fluid entered the wound through the cannula a peculiar paroxysmal cough appeared.

Dr. L. Emmett Holt, of New York, in discussing Dr.

Huber's case, believed it to be rather one of localized empyema.

Dr. Joseph Winters, of New York, was inclined to the same opinion, and believed the case of Huber to be one of localized empyema following one of pleuro-pneumonia.

Dr. Holt further said that he observed three cases of localized empyema, post mortem, within last year.

Round-Cell Sarcoma of the Skin of the Back in a Baby Aged Seven Months.—Dr. W. L. Carr, of New York, read the clinical history of a case he had seen at the out-patient department of St. Mary's Hospital for Children. The growth was first observed when baby was three months old. Size, seven-eighths of an inch in one direction, and one and five-eighths in the other. Dr. Freeman examined microscopically, and found it a round-cell sarcoma with a few spindle cells. Four months after operation showed no return of the growth, nor any disease of the skin or lymphatic structure.

Description of a New Incubator, by Dr. T. M. Rotch, of Boston. He stated that the incubator was part of an educational exhibit at Harvard. He minutely described the arrangement as to ventilation, regulation of temperature, and method of weighing the infant, without removing it from the incubator, by means of a button arrangement. It was nickel-plated and weighed about one hundred and fifty pounds. It can be moved from house to house, and resembles in outline a baby-carriage, having four wheels below the body. He had the aid of a prominent architect, and this greatly aided numerous hygienic arrangements.

Dr. August Caillé, in discussing the paper, stated that the New York Post-Graduate Hospital (babies' wards) were negotiating for purchase of the incubator and cited a case of symphiseotomy which was performed during the last winter which would have required the aid of an incubator.

Election of Officers.—The officers elected for the next year were: *President*, Dr. J. M. Keating, of Colorado Springs; *Vice-President*, Dr. Forchheimer, of Cincinnati; *Secretary*, Dr. S. S. Adams, of Washington; *Treasurer*, Dr. Townsend, of Boston; *Recorder*, Dr. N. P. Watson, of Jersey City; *Editor*, Dr. Crandall, of New York.

AMERICAN SURGICAL ASSOCIATION.

Annual Meeting, held at Buffalo, N. Y., May 30, 31, and June 1, 1893.

Nicholas Senn, M.D., President, in the Chair.

(Concluded from p. 733.)

Surgery of the Gall-bladder, by Dr. M. H. Richardson, of Boston. The paper was based largely upon personal experience. While the field is most brilliant and promising, anatomical and pathological considerations give it distinct limitations. It is seldom possible to cure or even relieve malignant diseases involving the gall-bladder or gall-ducts. With a few exceptions, operations are of questionable value in most cases of chronic obstruction to the bile-flow from causes other than stone.

A gall-bladder may be much enlarged, its functions may be entirely destroyed, and it may contain a large number of stones, without causing any symptoms. While it is justifiable to relieve this condition of simple dilatation to avoid possible future complications, interference is not essential in the absence of pain and of local and constitutional disturbances.

Impaction of the common duct results in universal jaundice, which may become a pronounced and fatal cholæmia. The gall-bladder and biliary passages become distended: perforation frequently occurs, with escape of bile into the peritoneal cavity, and death; or a spontaneous cure follows rupture into the intestine, the stone remaining fixed in the canal. At other times the stone makes its way by ulceration into the intestine, and permanent recovery takes place.

Operations on the gall bladder and biliary passages should not be undertaken until every means at our command to make a diagnosis have been exhausted. Unnecessary explorations should be avoided. In some cases the presence of malignant disease or other fatal organic disease can be shown clearly enough to justify a policy of non-interference. The anatomy of the region of the gall-bladder was carefully discussed and illustrated by diagrams. The point recommended for exploratory incision by the author is just to the right of the rectus muscle opposite the tip of the cartilage of the tenth rib. Here the abdominal wall consists chiefly of skin and fascia. An inch and a half opening is sufficient. If subsequent procedure is required, the opening may be continued upward along the border of the rectus muscle and outward parallel to the border of the ribs.

Operative Surgery of the Gall-bladder.—Gall-stones limited to the gall-bladder being the most frequent occasion for surgical interference, cholecystotomy is the most common of the surgical procedures. In the normal condition of the gall-bladder it is a simple operation. The gall-bladder may be sewed into the wound and incised at once, or opening may be deferred a day or two. The so-called ideal operation, where the opening in the gall-bladder is immediately closed, is the preferable one where it is practicable. When the gall-bladder is contracted, so that the fundus cannot be brought in contact with the abdominal wound, immediate incision with drainage or total extirpation are the alternatives. Unless we extirpate contracted gall-bladders, drainage must be resorted to. For drainage the glass or rubber drainage-tube with gauze packing for leakage around it answers admirably.

Cholecystectomy.—Extirpation is desirable in certain cases. This procedure should not be attempted unless the gall-bladder can be easily separated from adjacent structures. Besides lessening danger at the operation, it shortens convalescence; yet, even after extirpation, drainage and gauze tamponage is necessary.

Operations upon the Cystic, Hepatic, and Common Ducts.—There are few conditions of the hepatic duct which admit of operative manipulation. In health it cannot be catheterized; when dilated, it may be explored through the gall-bladder. Stones impacted in the duct may at times be crushed: at other times incision is required. The cystic duct, after apparent obliteration, becomes pervious at times as soon as the gall-bladder is opened. This must be explained by subsidence of inflammatory stenosis caused by long-continued irritation of the stones.

Operations upon the hepatic and upon the common duct are indicated when stones become hopelessly impacted in either. The incisions may be closed with suture at times; but oftener this is impracticable. A rubber or glass drainage-tube should then be placed in the duct with siphonage and the whole protected with gauze. In no case of operation upon the biliary passages has death followed remotely or immediately as the result of biliary obstruction, and in no case had the author observed septic infection from this cause.

Cholecystenterostomy.—In chronic organic, non-calculous obstruction we must expect chronic and fatal cholæmia; and we can provide artificially for the escape of bile, either externally or internally. Anastomosis between the gall-bladder and duodenum is preferable when possible. Deviation of the bile-flow into the colon seems compatible with health, and is often more feasible than the duodenal route. The anastomosis may be made by Senn's plates or Murphy's buttons, or mechanical devices may be omitted altogether. The essential point is to have the opening large enough to secure permanency. The contraction after anastomosis must be practically complete to arrest the natural flow of the bile. If the gall-bladder cannot be used for anastomosis, the common duct may be isolated and inserted through a slit into the duodenum. Operations upon the common duct by way of the duodenum may be practised under very exceptional circumstances. Obstructions in the hepatic duct above the point of junction with the cystic admit of no relief,

except occasionally by the formation of a fistula, although, theoretically, the duct above the constriction, if long enough, might be inserted into the gall-bladder. The prognosis after simple exploration is good, although, it must be remembered, that there is considerable mortality in advanced organic disease. After cholecystotomies, extirpations, and operations upon the ducts, recovery takes place in a very large proportion of the cases. In fourteen cases, including all methods of gall-stone extraction, the author had had two deaths—one from an avoidable sepsis, and the others from hemorrhage. In six exploratory operations there were two deaths, both cases of cancer.

In most of the author's cases there had been a marked and long-continued jaundice. In none had hemorrhage been an important factor at the operation, and in but one had there been secondary hemorrhage. He believed that hemorrhage is a real danger in cholæmia, but that its frequency and importance have been exaggerated.

Discussion.—Dr. J. Ewing Mears, of Philadelphia, Pa., referred to the occurrence in gall-stone obstruction of symptoms simulating malarial fever, and reported one case in which this was present. In this case there was impaction of the stone in the common duct. This was pushed forward into the duodenum, and the removal of the obstruction was shown by the escape of intestinal gas through the gall-bladder.

In contracted gall-bladder, where glass and gauze drainage is required, he would be inclined to apply ligature to the duct and allow the gall-bladder to remain in place. In that way we avoid the dangers of attempting to remove the contracted bladder. Attaching of the gall-bladder to the intestine is indicated in those cases where cholecystotomy or cholecystectomy or ligation of the duct cannot be performed.

Dr. William H. Carmalt, of New Haven, said that in 1886 he had performed the operation spoken of as ideal cholecystotomy. The patient had previously been operated upon by a distinguished foreign surgeon for floating kidney. The speaker operated under the impression that the case was one of movable kidney, but found the gall-bladder distended with bile from impaction of a gall-stone in the cystic duct. The stones were removed, and the wound in the gall-bladder closed and the organ returned to the abdominal cavity. The patient made a perfect recovery.

Dr. T. A. McGraw, of Detroit, referred to the great liability of the opening made in anastomoses between the gall-bladder and intestine or between intestine and intestine to contract. This, he thought, was due to separation of the mucous surfaces with the formation of cicatricial tissue and subsequent contraction. He described a new method which he had devised to overcome this difficulty, and exhibited specimens from animals illustrating the results obtained. Instead of making a simple slit in the gall-bladder, flaps are made and turned back and the peritoneal surfaces united. Then these flaps are inserted into the incision in the bowels and the edges of the gall-bladder incision secured to those of the incision in the intestine. There is thus a projecting ring of mucous membrane through the intestinal opening.

Dr. T. F. Prewit, of St. Louis, reported several cases of affection of the gall-bladder and biliary passages on which he had operated. He was surprised that the extravasation of bile was not followed by more serious consequences than had been detailed. Another striking fact is that, when the bile escapes around the tube, it is so easily prevented from further extension by the gauze. In one case he also had operated for supposed floating kidney, and found a distended gall-bladder. He then closed the lumbar incision and opened the gall-bladder through the anterior abdominal wall. A stone was found impacted in the cystic duct. This could not be readily dislodged; and as the condition of the patient did not warrant prolonged operation, fistulous opening was made. Subsequently a second operation was done with the view of getting rid of the stone. It could not be crushed, and needles had no effect upon it. It was finally removed piecemeal with the curette.

Dr. Stephen H. Weeks, of Portland, Me., reported a case of cholecystotomy which he had recently performed. The gall-bladder was found contracted to a very small size. It was incised, and a rubber drainage tube with gauze packing introduced. The condition of the patient, which before operation was critical, at once began to improve.

Dr. DeForest Willard, of Philadelphia, exhibited a number of gall-stones and the gall-bladder removed seven weeks ago. The gall-bladder was removed on account of suspected malignancy; since operation the patient has greatly improved, having gained thirty or forty pounds in weight. There was one stone lodged in the duct, but this was gently forced into the duodenum.

The second day's session was held at the Buffalo General Hospital, where a number of interesting cases were exhibited to the Association.

Surgical Treatment of Cervical, Thoracic, and Abdominal Aneurism, by Dr. C. B. Nancrede, Ann Arbor.

Conclusions — Cervical Aneurism. — 1. All methods should be supplemented by recumbency and diet. 2. Proximal compression, when feasible, should always be tried, and, where the arterial coats are seriously diseased, should supersede ligation. 3. Needling should supplement pressure when the case is progressing rapidly. Possibly it is advisable in all cases suitable for compression, and is certainly to be employed where this method fails in cases with highly atheromatous vessels. 4. Proximal ligation having been rendered much safer of late by the use of aseptic precautions, less absorbent ligatures, and the avoidance of all injury to the arterial walls by employing the stay-knot, is permissible when the arterial walls are relatively sound, until experience decides whether or not needling is superior in its results. 5. Since recurrence after proximal ligation almost certainly results from non-deposition of white thrombi and their maintenance in contact with the aneurismal wall from lack of proper changes of its lining, needling is clearly indicated. 6. Where the location prevents proximal arrest of the blood-current, needling is the best operation; possibly distal compression—rarely feasible—might aid in the deposition of thrombi. 7. For the reasons already given, although occasionally successful, the indications for the permanent introduction of such foreign bodies as wire, horse-hair, etc., into aneurismal sacs are so much better met by needling that such procedures had better not be adopted. 8. The modern revival of the older method of extirpation of aneurisms should not be attempted for spontaneous cervical aneurisms.

Thoracic Aneurism.—1. All methods should be aided by the employment of rest in bed and proper diet. 2. The permanent introduction of foreign substances should not be employed. 3. Needling should be tried, aided by distal compression when feasible during the use of the needles; if this fails, distal ligation should be resorted to. 4. Distal interruption of the blood-current by simultaneous ligation of the carotid and subclavian arteries may be tried. 5. Needling is indicated when complete or partial failure follows distal ligation.

Abdominal Aneurism.—1. All methods should include recumbency and diet. 2. Needling, when this can be done without injury to the hollow viscera, is the most promising plan. 3. Proximal or distal compression may be tried with or without needling, but to be effectual must be done under anæsthetics. 4. The permanent introduction of foreign bodies into the sac is inadvisable. (See 7, Cervical Aneurism.)

Dr. W. W. Keen, of Philadelphia, agreed as to the importance of rest in the recumbent position and restricted diet. He had not as yet employed needling in any case. The method is still on trial. The introduction of foreign substances into the sac does not seem to

be altogether logical nor have the results been satisfactory.

Dr. P. S. Conner, of Cincinnati, said that he was disposed to look upon operative procedures in aneurism with more favor than he did a few years ago; for the latter methods have lessened the risks, and by ligature of the artery you secure for a time such quietude as cannot be secured in any other way.

Dr. T. S. Prewitt, of St. Louis, fully agreed with the previous speakers as to the importance of absolute rest and restricted diet.

Dr. Joseph Ransohoff, of Cincinnati, in one case of aneurism at the root of the neck, had transfixed the sac by two needles, which were allowed to remain ten or twelve hours. This was followed by considerable hardening in the sac. In this case rest could not be maintained. Two weeks after the needle operation was done he left the hospital, and died some time later from pressure of the aneurism upon the trachea.

Surgery of the Rectum, by Dr. A. G. Gerster, of New York. The paper was based in part upon the cases treated at Mt Sinai Hospital, New York, during the four years ending January 1, 1893. During this period five hundred and fifty-seven patients with rectal disease were admitted. Two hundred and eighty of these were classed under the head of hemorrhoids. Next in frequency were fistula.

Hemorrhoids.—In recently developed and moderate cases depletion of the portal circulation by salines, etc., is often sufficient. In the way of operation, decided preference was given to the clamp and cautery, which was always chosen in the absence of special indication in favor of any other method. After thorough stretching of the sphincter and proper preparation of the gut by adequate laxation, this process has given invariably satisfactory results. Whitehead's or Lange's operation was reserved for the more aggravated cases, characterized by prolapse of the anal or rectal mucous membrane. The results of this operation, if the essential points of the technique are faithfully carried out, are more brilliant and rapid than those of any other known method.

Fistula in Ano and Ischio-Rectal Abscess.—One hundred and eighteen cases of fistula had been operated upon. The average time needed for cure was eighteen days, and varied from five to sixty-five days. Shortening of the time required for healing was accomplished by a careful excision of the pyogenic membrane of the fistula and immediate catgut suture of the wound in tiers.

Among the forty-nine cases of ischio-rectal abscess there were some dreadful forms of destructive phlegmon of the ischio-rectal connective tissue. Over one third occurred in diabetic subjects. The treatment consisted in converting the irregular burrows into a simple and shallow, often very extensive wound. This was followed by immediate improvement and a marked diminution in the amount of sugar in the urine.

Ulcers of the Rectum and Fissure in Ano.—The cases of ulcer were treated by excision and suture, with satisfactory results.

Cicatricial Strictures of the Rectum.—Extensive and mostly intractable ulcerative proctitis was observed six times, all in women. In four cases linear proctotomy and gradual dilatation gave moderate alleviation. In two cases inguinal colotomy was done. In one of these cases excision of rectum was later resorted to, with a fatal termination due to collapse from acute anæmia.

Prolapse of the Anus.—Eleven cases were treated, mostly children of tender age. The linear application of the actual cautery was generally followed by a cure.

Rectal polypus was treated in seven cases, mostly children, by ligature and ablation. An eighth case, one of multiple adenoma of the rectum, was also treated. The masses were burnt off or tied off by ligature. Four weeks later, coccyx and portion of sacrum removed. Rectum was laid open and a number of adenoma high up were removed. The wound was left open, and at subsequent periods other tumors were removed as they formed.

Rectal Carcinoma.—Seventeen cases were observed. Five cases declined operation, and in three no operative treatment was considered advisable. In the remaining nine cases inguinal colotomy was done five times, with one death. Kraske's excision of the rectum was performed three times, with one death: and once the old-fashioned perineal extirpation was successfully resorted to. Cicatricial or neoplastic stenosis of the rectum was always considered an ample indication for the performance of colotomy. Colotomy was done as follows: After thorough purgation a longitudinal incision was made two inches to the inward of the left anterior superior spine, beginning two inches above Poupart's ligament. After division of the peritoneum, it was attached to the skin by a few silk sutures. The colon was sought for and withdrawn sufficiently to bring the mesentery of the middle of the coil to the surface; then a long shawl-pin was passed through skin and peritoneum on one side, then through the mesentery behind the gut, and finally, through the peritoneum and skin on the other side: a circular continuous suture was run around the incision. Forty-eight hours later the gut was opened by a transverse incision reaching nearly down to the mesentery.

Discussion.—Dr. L. S. Pilcher, of Brooklyn, N. Y., said that in dealing with hemorrhoids he had usually employed ligation and removal, but in the more severe cases had used excision by the Whitehead-Lange method. The results had been so satisfactory that he had not employed the clamp and cautery. Among the disadvantages of the method of excision are the length of time required and the tendency to free bleeding.

In fistula good results had been obtained in a number of cases by dissecting out the entire tract and applying sutures: this is not applicable to all cases.

The speaker had had ten cases of carcinoma of the rectum. In six cases attempts at relief by operation were made. Two of these cases resulted fatally a short time after operation; in the others relief was offered for a certain length of time.

Dr. H. H. Mudd, of St. Louis, said that some time ago he had given up the use of the ligature on account of the pain caused by it, and had substituted the use of the clamp and cautery for a period of two years. He had two severe hemorrhages while using this method, and did not consider it as safe as the ligature. He now uses the ligature in a modified way. He cuts through the portion of tumor on the skin surface, and then applies the ligature to the upper portion of the mass.

The cases of cancer of the rectum that he had seen had usually been at a late period. He had done two extirpations by the perineal method with success. He had attempted removal after excision of the coccyx and sacrum without success. In one case he had excised the upper portion of the rectum through the abdomen and made an end to end anastomosis with success.

Dr. L. McLane Tiffany, of Baltimore, said that in cases of ulceration in cicatricial stenosis he had seen improvement follow colotomy, although the cicatricial contraction in some cases almost completely closed the rectum.

Dr. T. S. Prewitt, of St. Louis, held that where inguinal colotomy is done in cases in which there is no hope of restoring the natural passage, it is better to divide the bowel entirely, and thus prevent the passage of fecal matter into the distal portion of the intestine. He objected to the closure and dropping of the distal end, for there may be collection of secretions in the bowel which it is desirable to wash out, and this can be done conveniently if the opening is allowed to remain.

Dr. Charles B. Nancrede, of Ann Arbor, thought that there was no danger from hemorrhage in the clamp and cautery method, provided it was done properly and the tissue not burnt off rapidly. He had never seen primary or secondary hemorrhage from it.

Dr. A. G. Gerster, of New York, said that hemorrhage never occurred with the clamp and cautery method, provided the cautery was properly applied and not too much heat employed.

In the Whitehead or Lange operation profuse hemorrhage does not occur unless the incision is carried in too far. It should hug closely the inner margin of the sphincter, and the mucous membrane should be stripped off without the use of the knife. In the final transverse division of the mucous membrane a small portion only should be cut at a time, and this secured by suture before another portion is cut.

Dr. Roswell Park, of Buffalo, exhibited anatomical specimens illustrating a method of preparation. Preparations of joints were shown made thirteen years ago, in which the joints were still movable, although they had been exposed to the air.

Report of an Attempted Bloodless Operation for Malignant Polypus springing from the Base of the Skull, by Dr. Roswell Park, of Buffalo. The case was one of rapidly growing malignant tumor completely filling the pharynx, in which operation was attempted at the patient's request. In order to lessen danger from hemorrhage, he adopted the method suggested by Senn of isolating the trachea and passing a rubber tourniquet around the balance of the neck. While there was no arterial hemorrhage, there was excessive venous bleeding. The jaw was resected and the malignant material removed. During the operation respiration ceased, and efforts at restoration were required for forty-five minutes before the operation could be completed. The patient left the table in apparently good condition, but died the next morning from shock, there having been no bleeding.

Election of Officers.—The following were elected as the officers for the ensuing year:

President, Dr. J. Ewing Mears, of Philadelphia; *First Vice-President*, Dr. Roswell Park, of Buffalo; *Second Vice-President*, Dr. Lewis S. Pilcher, of Brooklyn; *Secretary*, Dr. J. R. Weist, of Richmond, Ind.; *Treasurer*, Dr. John B. Roberts, of Philadelphia; *Recorder*, Dr. DeForest Willard, of Philadelphia; *Member of Council*, Dr. J. Collins Warren, of Boston; *Chairman of Committee of Arrangements*, Dr. L. McLane Tiffany, of Baltimore. The following were elected to membership: Dr. H. S. Burrell, of Boston; Dr. Perry H. Millard, of St. Paul; Dr. Albert B. Miles, of New Orleans; Dr. Samuel J. Mixter, of Boston; Dr John W. Elliott, of Boston; Dr. John Parmenter, of Buffalo; Dr. J. McF. Gaston, of Atlanta.

To honorary membership: Professor Carl Gussenbauer, of Prague.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

ANTI-VACCINATION IN PARLIAMENT—PARASITISM OF CANCER—REPORT OF COMMITTEE ON MR. JACKSON CLARKE'S PREPARATIONS—SPECIMENS AT THE PATHOLOGICAL SOCIETY—CHYLOUS PLEURISY AND ASCITES—EXCISION OF CÆCUM AND TESTICLE—INTESTINAL OBSTRUCTION BY GALL-STONES—ABSCESS OF LUNG OR POSTERIOR MEDIASTINUM—SALE OF POISONOUS QUACK MEDICINES.

London, May 20, 1893.

The anti-vaccinationists have managed to get up a debate in Parliament, and no doubt feel that they have had a sort of triumph. They were led by Mr. Hopwood, a barrister, who, perhaps, by virtue of his profession, felt himself capable of comprehending the subject better than medical men, and was ready to make the worse appear the better cause. But he carried the privilege of the bar too far. To abuse opponent's attorney is an old dodge, but to bring scandalous charges against a whole profession is an unjustifiable abuse. Having no case, Mr. Hopwood availed himself of the position of a member of Parliament to declare that the doctors only supported vaccination for the sake of the fees it brought them. He even fell foul of the officials of the Local Government Board on this ground, and pretended their salaries depended on vaccination. The defence of the Vaccination Acts devolved on Sir W. Foster, who delivered a speech bristling with important statistics, and defended his profession from the unjust charges brought by an advocate who ought to have known better. But what shall be said of the Government? The members of the Cabinet were conspicuous by their absence, and the whips, who always act as tellers when a Government department is attacked in the House and defends itself, actually deserted Sir Walter Foster. Even the party papers, or at any rate the most important of them, sneer at this "weak-kneed half surrender," as the *Times* calls it, and generally attribute it to the hope of catching a few votes from the ignorant faddists who lead the anti-vaccination cry. Probably, however, the votes gained by such subserviency may be more than counterbalanced by the disgust which has been produced throughout the medical profession, which has no reason otherwise to place any confidence in the present ministry.

The report of the Morbid Growths Committee of the Pathological Society was presented on the 16th, and is decidedly unfavorable to Mr. Jackson Clarke's views on the parasitism of malignant tumors, of which I have previously given an account. The committee are "unanimously of opinion that notwithstanding the labor expended by the author on this subject, and the feasible hypothesis or scheme he has framed, he has quite failed to prove his particular contentions." This report will, no doubt, carry great weight, whether it convinces Mr. Clarke or not. When pathologists are at direct variance, others may wait the result of further research in patience.

At the same meeting the specimens exhibited included Astley Cooper's retroperitoneal hernia, septic endocarditis in a calf, traumatic dissecting aneurism of the aorta, and fracture through the anatomical neck of the humerus. A paper was also read by Dr. Turney on a case of chylous pleurisy and ascites. The thoracic duct was found dilated throughout its length and blocked at its outlet by thrombosis of the internal jugular and subclavian veins limited to that spot. The author suggested that this was due to the lodgment of a cancerous embolus, as there was scirrhus of the pylorus and general dissemination through the lymphatic system.

At the clinical society, on the 12th instant, Mr. Bruce Clarke showed a boy from whom he had removed the vermiform appendix with about two inches of the larger and as much of the smaller intestine for irreducible congenital hernia. As the testicle was firmly adherent to the appendix and to the scrotal wall, it was also removed. The operation was done a year ago, and the boy is quite well, without a trace of hernia. The cut ends of intestine were united by a double row of continuous sutures, and the patient was up in less than three weeks. The preparation of the excised parts was exhibited. Mr. Clarke thought this was the only case in which this form of suture had been successfully employed, and that it was always desirable to cut away enough gut to be sure of bringing together healthy tissues. I note that cases have been recorded in which considerable lengths have been successfully removed. It is an advantage of this suture that it does not take long to apply. It was suggested that the adhesion was due to an inflammatory process *in utero*, and that the testicle in descending dragged upon the cæcum.

Mr. Robert Nairn then related a case of intestinal obstruction in a woman of seventy-five, caused by the impaction of a gall-stone in the jejunum. There were no symptoms pointing to the cause, but the abdomen was opened, and the stone, three inches in circumference, was found blocking up the jejunum, and was removed. The patient bore the operation well, and felt relief, but suddenly sank about ten hours afterward.

Several other cases of impacted gall-stones were mentioned by different members, but they had been preceded by attacks of colic, which were absent in this.

Dr. Alexander Morrison related a case in which the diagnosis lay between thrombic inflammation of pulmonary tissue and the discharge of an abscess of the posterior mediastinum through the lung. As no autopsy could be

obtained, the question was not cleared up. A small quantity of pus had been evacuated through an incision in the right interscapular region and the wound treated antiseptically. As this afforded some relief, it was naturally asked why further surgical proceedings were omitted, the reply being that the condition of the patient was unfavorable and the friends objected. A member also asks whether the liver might have been the source of the suppuration; but Dr. Morrison replied that there were no signs pointing in that direction.

A case of pseudo-bulbar paralysis was further reported, being that of a man previously exhibited before the society. The patient has chronic Bright's disease. He is fed entirely by an œsophageal tube.

The Pharmaceutical Society has lately done good work for the public by prosecutions for the sale of proprietary medicines containing poisons without being so labelled. This has at length been pronounced illegal by a higher court, and the result will be to prevent the sale of these poisons by grocers and other shopkeepers, confining the sale in fact to pharmacists. This will be satisfactory to the members of the society. It may be remarked, however, that the action was only tardily taken, and would probably have been still longer delayed but for some wholesome pressure brought to bear by the Parliamentary Committee of the British Medical Association. This committee keeps watch upon those bills in Parliament which affect medical men and sanitation and supports legislative endeavors to promote public health.

The sale of quack medicines has also received another check. The licensing authorities have declared that the Sequah Company may not legally hawk their wares in the manner they have been doing. Is not the idea monstrous that a joint-stock company should have been formed to send out vans of quack medicines through the villages?

MEDICAL ASPECTS OF THE WORLD'S FAIR.

(From our Special Correspondent.)

CHICAGO, June 14, 1893.

UNTIL within the past week there has been little at the Fair that has attracted attention from a medical point of view. Even at this time many of the exhibits are incomplete. To the medical man contemplating a visit to the Fair there are other things of interest and importance, some of which must demand his attention before he visits Jackson Park. How and where shall he be lodged and fed? If a prolonged stay is contemplated, or if economy is an object, it will be well to avoid all hotels and boarding-houses in the immediate vicinity of the Fair, at least in a general way and for the present. Here it is that furnishings will be scant, service poor, and rates unexpectedly high. The principle upon which charges seem to be based is the same as that upon which the late Doctor Francis, of Newport, R. I., is said to have advised for the charges for medical attendance: "Temper the wind to the shorn lamb: but be sure to shear the lamb." In the larger hotels in town the charges have been much increased for rooms, but the restaurant charges are practically unchanged; while in the smaller hotels, especially those much frequented by commercial travellers, the charges are the standard ones, the proprietors being content with stopping rate-cutting. In such hotels a comfortable single room may be had for the night for a dollar. Restaurants in the town, not connected with hotels, have not increased their charges. Boarding-houses have, as a rule, except in the extreme northern and western portions of the city, increased their rates; but it will in most instances be found that they will "consider any reasonable offer." It would seem to me to be wiser to stop for the first twenty-four hours at a hotel and select for yourself permanent quarters than to trust to the numerous agencies that have flooded the country with circulars. There are two agencies for the providing of rooms that the doctor may safely trust to—that of the *Medical Bulletin*, in the Masonic Temple, under the management of the genial Dr. Kaufmann, and that of Truax, Greene & Co., the surgical instrument-makers, at 75 Wabash Avenue. At either one may register, receive his mail, and obtain a list of houses at reasonable rates. For this service there is no charge; but I suppose that a patron would feel bound to subscribe for the *Bulletin* in the one instance, and make a few purchases in the other. In other words, these are business enterprises of business men, and in no sense under the control of the Charity Organization Society.

For one's personal health two things should be avoided—living in a house with a cellar, and drinking water that is not known to be pure. Under certain conditions of wind and rain the cellars in certain portions of the city become flooded, sometimes from a return flow of the sewers. In these houses diphtheria and typhoid may at times be found. The Lake water when taken from the four-mile crib is probably always pure: but there is no assurance that every glass comes from there. It is strongly suspected that water has been taken from the two-mile crib, and even from the one-mile crib at times, without due notice to the people. The water at the two-mile crib is pure when there have not been recent heavy rains and when the wind is not from the west. The water from the one-mile crib has not been pure for years. Further than this, an undiscovered or unattended leak in the tunnel may contaminate the water supply. There is reason to suspect that such a condition of affairs existed when typhoid was so prevalent here. Most of the hotels and restaurants serve either pure spring water, or water that has been passed through a Pasteur filter, and at any place one may be assured of the safety of the water by boiling it. A word of warning, however, is proper: Do not always trust to a label. At the Fair certain boxes are placed, provided with cups, and labelled "Sterilized Water." These boxes did at one time contain sterilized water, but recently the sterilizing plant has been unable to supply the demand, yet the boxes do not run dry. For a penny-in-the-slot, however, one may obtain a glass of cooled spring water from Wisconsin.

The medical societies and some of the colleges are making special efforts to welcome the visiting medical gentlemen. There are committees of reception who may be expected to look after their personal friends and smile and shake hands with the rest of the medical visitors. One of the medical schools has invited a large number of guests to deliver addresses, and has instructed its committee to the effect that the school will not pay the board of these guests, but that the individual members of the committee must, when required, become surety therefor. It has been a question in my mind whether this is more a reflection upon the financial standing of these foreign professors, or upon the hospitality of the members of the committee.

During the past week three medical associations have held meetings at the World's Fair: The Homœopathic Congress, the American Medico-Climatological Association, and the Eclectic Medical Congress. At the Post-Graduate Medical School Professors Henry D. Noyes and Herman Knapp, of New York, have addressed large and appreciative audiences. On Friday Dr. Reynolds, Commissioner of Health, arranged for an excursion to the four-mile crib, Mr. Ernest Hart, editor of the *British Medical Journal*, being the guest of honor. The excursion, however, was deferred, as the venerable Englishman feared the results of one of Chicago's rainy days. On Saturday evening Dr. John E. Owens, Medical Director of the World's Fair, gave a small dinner in honor of Mr. Hart.

The Expenses of the Berlin Congress.—When the accounts of the Berlin International Congress were wound up it was found that $35,185 had been received from subscriptions, and $17,500 had been granted by the Government. The expenses amounted to $51,510, leaving $1,175 to be refunded to the Government. The publication of the Transactions cost $14,250.

ON THE USE OF PLACARDS FOR INFECTED TENEMENTS.

To the Editor of the Medical Record.

Sir: A few weeks ago I read in the Medical Record a note from Dr. Louis Fischer, relating some interesting facts regarding the notification of infective diseases in New York, and advocating the erection of warning placards wherever such diseases might be discovered. The inference to be drawn from his remarks was to the effect that in this way the prevalence of such domestic pestilence may be greatly restricted.

Now it so happens that in this proposal there is nothing new. The expedient thus recommended has been tried for hundreds of years, and its results are before the world for examination. In this city we have had constant experience for twenty years of this method of suppressing infective disease, and it is not difficult to ascertain the opinions of physicians who have had ample opportunity for observation. The consensus of opinion is the same that prevailed in London at the close of the Great Plague, in 1665, that the attempt to arrest infective disease by placarding houses and quarantining the inmates, serves only to intensify disease and to retard its suppression. In his interesting "History of Epidemic Diseases in Great Britain," Dr. Creighton tells us that this method of dealing with the plague originated at some unknown epoch in the Middle Ages, probably not as a result of medical forethought, but as a consequence of the horror with which kings and their courtiers dreaded intercourse with their infected subjects. When the pestilence was ravaging the country in the days of Queen Elizabeth and other royal personages, the sanitary officials were frequently reprimanded by the officers of the court, and they were exhorted to greater diligence in the work of shutting up and placarding infected houses. The reply was always the same: "We are doing all we can, yet it does no good." At the close of the great London Plague, in 1665, all who had experienced its horrors and had survived to record their observations, testified that isolation and placards were worse than useless in dealing with the epidemic.

The adoption of the same discredited method in modern attempts to suppress the domestic pestilences of our day, undoubtedly has its reason in the instinctive feeling with which human nature recoils from contact with loathsome and contagious diseases. Captain Cook has told us how the unsophisticated Tahitians abandoned their comrades and relatives when syphilis first appeared among them. The delimitation of yellow fever by "shotgun quarantines," and the good result of careful isolation during the occasional outbreaks of scarlet fever, diphtheria, etc., that occur in small country towns, have led sanitarians to the hasty conclusion that methods which are successful during brief periods of panic in communities where everyone knows everybody, must therefore be the best methods of dealing with endemic diseases that are continually present in the crowded population of a large city, where a privacy that is unknown in the country can be easily secured. But in this, as in many other results of sanitary effort, the outcome of experience quite contradicts the previsions of hypothesis. When Captain Cook's Tahitians found that separation from their syphilitic companions involved the loss of much that they deemed most precious, they soon grew tolerant of the disease, and were not long in becoming quite reconciled to their former promiscuous intercourse. Panic is never of long duration among the masses of mankind; and regulations that were born of panic have but short-lived influence. Only in small communities under a practically military despotism is it possible to enforce stringent measures that are offensive to the people.

When confronted with these facts it is usual for enthusiastic sanitarians to insist that the fault is not in the law, but that it lies with the people whom it does not reach, and who conceal their infected children. They are fond of saying that the people only need education to appreciate the value of such legislation, and then all will go well. But experience shows that the people in our large cities do not appreciate such education. They find it much easier to conceal disease than to reconcile themselves to the placarding of their houses; consequently a systematic nullification of the law becomes habitual, and both physicians and people seek to evade the law rather than to make it effectual.

Since it is, nevertheless, desirable that the presence of infective diseases among the people should be always made known to the sanitary officials, every effort should be made to minimize the motives for their concealment. Much of the objection to notification in our large cities is due to the dislike of placards upon the premises. I have never yet seen a case of scarlet fever or diphtheria in Chicago where the isolation of the patient was made any more effectual by a placard. I have known of many cases where unnecessary hardship and pecuniary loss have been sustained because the sanitary authorities would do nothing nor furnish any assistance beyond the placing of a placard. I have known of many unnotified cases that would have been cheerfully notified but for the dread of the placard. I have known of the actual flight of patients and the wide-spread dissemination of contagion, in the endeavor to escape the placard. Among intelligent members of the community who submit to sanitary regulations, effectual isolation and disinfection are easily secured without resort to placards; while among the lower classes such advertisement adds nothing to the isolation of the patient.

In my opinion it would be much wiser to use the placard as a means of enforcing necessary measures for isolation and disinfection, rather than for the advertisement of disease. Let the sanitary officials use it only when really needed. Give the infected family to understand that if proper measures for isolation and disinfection are employed, the placard will be withheld, but that otherwise it will be displayed. Thus employed it can be made a useful weapon, instead of being, as now, productive of more harm than good.

Henry M. Lyman, M.D.

Chicago, Ill.

A LAW REGULATING THE PRACTICE OF MIDWIFERY IN ERIE COUNTY, N. Y.

To the Editor of the Medical Record.

Sir: Some discussion in the New York journals recently, regarding the importance of having a law regulating the practice of midwives in this State, leads me to call your attention to the fact that such a law has been in operation in Erie County since 1885. The law is entitled, "An act regulating and restraining the practice of midwifery in Erie County by others than legally authorized physicians"—Chapter 320 comprising seven sections.

The law has worked satisfactorily in every respect.

Yours,

P. W. van Peyma, M.D.,

Secretary Board of Examiners in Midwifery for Erie County.

Buffalo, May 23, 1893.

The Filthy Train.—A prominent physician, who gives close attention to bacteriological study, says: "Lately the long dress trains worn in the streets by our ladies suggest another way to carry tubercle and other bacilli into our houses. In walking along the streets we constantly see a dress wipe up portions of sputum from the pavements. From one of these dresses dragged over the streets a few times I was able to demonstrate the presence of seven tubercle bacilli on an inch microscopic slide on which a little dirt off a dress was dusted. Knowing, therefore, that these long dresses have dried tuberculous sputum on them for the maids to dust off in our ladies' dressing rooms, most of which are poorly ventilated, we can quite understand how a sufficient number of bacilli can be collected in small compartments to an extent dangerous to at least those predisposed to tuberculosis."—*Annals of Hygiene.*

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Original Articles.

ADVANCEMENT OF A PORTION OF THE SUPERIOR MAXILLARY BONE IN CASES OF HARE-LIP, WITH ANTERIOR CLEFT OF THE HARD PALATE, FOR CORRECTING THE DEFORMITY OF THE ALA NASI.

BY JOHN A. WYETH, M.D.,

NEW YORK.

PROFESSOR OF SURGERY IN THE NEW YORK POLYCLINIC; SURGEON TO MOUNT SINAI HOSPITAL.

IN the earlier operations for hare-lip, in which there was an intra-maxillary cleft extending through the alveolar arch in front, I found it impossible to correct satisfactorily the flattening of the wing of the nose upon the side in

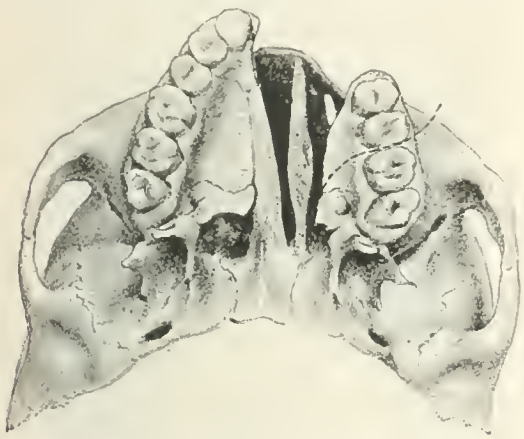

FIG. 1.—Showing Line of Division and Fracture of the Deficient Upper Maxilla before Advancement.

which the bony deficiency existed. Although the soft structures were, according to the directions of the text-books, thoroughly dissected loose from the deep attachments and the fissure in the lip was well closed, the ala nasi remained flabby and flattened, and the nostril was

FIG. 2.—The Same after Advancement and Suturing in Position.

very unlike that of the unaffected side. A more careful study of the condition which produced such a result convinced me that a symmetrical nose could never be obtained until the bony foundations upon which the cartilages and alæ nasi of the two sides rested were level, and this could only be done by advancing the anterior portion of the upper maxilla of the short or deficient side.

If the reader will glance at Fig. 1, which shows about the deficiency found in anterior or complete clefts of the hard palate, it is plain that the ala nasi, which rests on the normal maxilla, will be in advance of the ala of the other side, and it is also clear that no amount of plastic

FIG. 3.—Girl with Wide Fissure and Recession of Ala Nasi. Patient has also strabismus with coloboma iridis.

work on the soft tissues will bring and retain this wing on the level of its fellow. If, however, the bone is divided in about the line indicated by the dotted mark, and forcibly advanced to meet its fellow, as shown in Fig. 2, the gap will be transferred to a concealed part of the

FIG. 4.—The Same after the Nick was Obliterated by Nélaton's Operation.

mouth and jaw. The alæ nasi now have points of support on the same plane.

Fig. 3 is an accurate process picture from a girl, showing the cleft in the lip and palate, and the recession of the ala nasi. Fig. 4 shows the alveolar arch completed

by the advancement. Figs. 5 and 6 are after the plastic work on the lip is complete.

The procedure is this: After anæsthesia is effected a hole is drilled about one-fourth of an inch from the anterior edge of each of the maxillary bones through the bone, and large enough to permit the introduction of a large, soft, silver wire. The edges, which after the advancement will be in contact, are fastened with cutting forceps or knife, and about half-way back along the alveolar process of the short side, between two teeth, a strong

FIG. 5.—Same Patient, in which the Maxilla of the Deficient side has been Advanced. The completed alveolar arch can be seen between the fissure of the lips.

FIG. 6.—Same Patient after Closure of Hare lip. A small nick on the vermilion border.

FIG. 7.—Case of T. E——, in which the Upper Maxilla was Advanced.

FIG. 8.—Complete Anterior Cleft.

FIG. 9.—The Same after the Bone was Advanced and the First Operation done on the Lip.

FIG. 10.—A Typical Complete Anterior Fissure before Operation.

cutting forceps or scissors divides the upper jaw deeply and freely at a right angle to the plane of the alveolar process. Instead of inserting a lever or pry to fracture the piece forward, it is best to carry a very strong cord in the fissure made by the cutting instrument and pull on this until the fracture is complete and the fragment is advanced. When this is done, a few twists of the silver wire bind the fastened surfaces together and hold the piece in its advanced position. As the soft parts have not been disturbed the bone gets its nutrition from this source, although cut off posteriorly. At least eight weeks

FIG. 11.—The Same after the Procedure was Completed.

should elapse before the plastic work on the lip is undertaken. By this time the nutrition of the bone in its new position is assured.

The results I have obtained by this operation are far more satisfactory than by any other method with which I am acquainted.

In those cases of cleft palate in which the intermaxillary process is attached to and projects from the anterior edge of the full side, it is always easy to bend or force this piece back in line with the short side and wire it here, thus completing the alveolar arch in front, and giving the ala nasi level foundations to rest upon.

FIG. 12.—Case of N——, Showing Result in Hare-lip without Osseous Fissure.

The results in some of those cases so operated upon are shown in Fig. 7, in which the deformity was greater than is shown in Fig. 8 or 10. These pictures are from photographs, and are therefore accurate reproductions of the cases. In Fig 8 the child had to be chloroformed to get the picture. Fig. 9 shows the result of the first operation on the lip. The parents were so well satisfied with the result that I was not permitted to do the final operation for the removal of the small nick which persisted.

The method of closing this indentation of the vermilion border which I prefer, is known as Nélaton's procedure.

DIETETICS IN DISEASES OF THE STOMACH.[1]

BY MAX EINHORN, M.D.,

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DIETETICS, or the doctrine of nourishment, has taken an important part in the treatment of the sick ever since the time of Hippocrates; but although the dietetics of the diseases accompanied by fever have not changed much in the principal points, new rules and principles regarding nutrition in chronic diseases have been introduced of late. This has reference especially to diseases of the stomach, that branch of internal medicine which in the last two decades has shown so much unlooked-for progress. As the therapeusis of diseases of the stomach has to deal with dietetics principally, I thought it would be of interest to discuss this subject before you. It may be expedient to divide this subject into three parts:

1. General rules of dietetics in diseases of the stomach.
2. Dietetics in acute diseases of the stomach.
3. Dietetics in chronic diseases of the stomach.

1. **General Rules of Dietetics in Diseases of the Stomach.**—Within the past two years important facts have been discovered which are of the greatest value in the treatment of diseases of the stomach, and the influence of which can be perceived like a red thread through the whole chapter of dietetics. It has been shown, by von Noorden[2] and others that emaciation in chronic diseases of the stomach is caused in the largest majority of cases—if, perhaps, not in all—not by specific poisons circulating in the organism, but by a smaller amount of food being taken. On the other hand, one might expect, judging from the universal law existing in the plant and animal kingdom of vicariousness or replacement in case of inability of the work of one organ by another similar one, that in grave disturbances of the digestive functions of the stomach, the intestines would do the work instead. This has been experimentally, as well as clinically, proven in the most infallible way. Several authors (Leube, Ewald, von Noorden) have observed that in the cases of atrophy of the mucous membrane of the stomach, in which, as you all know, the gastric secretion has entirely ceased, the patients can maintain their usual weight. From my paper on achylia gastrica[3] it is clearly seen that the patients can do very well without gastric secretion; under a proper regimen they can even gain in weight, and live long without any discomfort whatever. That means that even after the loss of the entire chemical action of the stomach, the gut is completely able to replace the function of the stomach.

These two facts, 1, that the emaciation in chronic diseases of the stomach is caused by too small a quantity of food; 2, that even in grave lesions of the gastric functions the gut appears to perform vicariously the digestive work in a complete way, are of vital importance for the doctrine of dietetics. For it is seen at a glance that the main object of nutrition of the sick consists in giving them sufficient quantities of food. Before proceeding it is necessary to briefly review the normal physiological nutrition of man. We perceive quickly that there is a great variety in the food of healthy persons with regard to the quantity as well as to the different food substances. Nevertheless, they all contain the three groups of foodstuffs: Albumin, carbohydrates, and fats. Thus, for instance, vegetarians live and thrive principally on vegetables; the Esquimos, on the other hand, almost exclusively

[1] Read before the Medical Society of the County of New York, May 22, 1893.

[2] Von Noorden: Berliner Klinik, Heft. 55.

[3] Max Einhorn, MEDICAL RECORD, 1892.

on animal diet. The golden path, however, lies intermediate, and all authors (Voit, Pettenkofer, Hoffmann, Forster, and Gruber) recommend a combination of animal and vegetable food. R. Virchow, likewise, is of the same opinion, and expresses himself regarding this question as follows: "Although the Kirghez and the Esquimos show us that health and life can exist through many generations on an exclusively nitrogenous diet—other tribes (Hindoos) live principally on non-nitrogenous food—still history shows us that the highest attainments of the human race have emanated from nations who have lived and live on mixed diet." A mixed diet, taken partly from the vegetable and partly from the animal kingdom, is the most suitable form of nourishment. We obtain the greatest amount of carbohydrates from the vegetable kingdom, while a great deal of the albumin is derived from animal food. The relation between animal and plant albumin, according to Munk and Ufflemann,[1] should not be less than three to seven. As regards the quantity of food, according to the same authors, an adult doing a medium amount of work requires daily one hundred and eighteen grammes albumin, fifty-six grammes fat, and five hundred grammes carbohydrates.

Food only in small portions serves the purpose of reconstructing tissue waste; in its largest part, however, it is used for generating the heat requisite for the maintenance of life. For that reason it is customary to speak of the necessary amount of heat-units during twenty-four hours instead of the quantity of food. By "heat-unit" is meant, as is well known, that quantity of heat which is required to raise the temperature of one gramme of water one degree Celsius. "Great heat-unit" means the amount of heat required for warming one thousand grammes of water one degree Celsius. Each kind of food is ultimately oxidized in the body to its end-products, and is in greatest part exhaled in the form of carbonic acid; the more carbon atoms food-stuff contains the more heat-units it will generate. In speaking of the heat value of food, the great heat-units are used, the term "great," however, being omitted. Thus one gramme of albumin generates 4.1, one gramme of fat 9.3, and one gramme of carbohydrate, 4.1 heat-units. If we know the quantity of nourishment taken, the amount of the introduced heat units is easily determined by multiplying the different food-stuffs by the above given figures. The daily amount of heat generated by the body, or necessary for the maintenance of the same, has been approximately estimated at 2,500 heat-units.[2] The heat value of the food taken by an average working person amounts, according to von Noorden,[3] to about forty heat-units when working, and when resting to about thirty four heat-units per kilo a day. According to K. Vierordt[4] an adult takes in form of food a daily average of 120 gm. albumin, 90 gm. fat, 330 gm. carbohydrate (the relation of the nitrogenous food-stuffs to the non-nitrogenous being 1 to 4), and 2,818 gm. of water. The above-mentioned figures differ from those given by F. Hirschfeld.[5] This author demands 80 gm. of albumin as the lowest amount contained in a sufficient diet. Victuals are composed mostly of all the three food groups (albumin, carbohydrate, fat) and water, and contain in minute amounts the inorganic salts found in the body.

In order to have a correct idea of my own about the quantity of nourishment taken daily, I have weighed and recorded for two successive days all the nourishment and drinks taken by my wife and myself. The record showed that I had taken during the first test-day 63.8 of albumin, 47.3 of fat, and 168.8 of carbohydrate; the total number of heat units was 1,402.3. During the second test-day the corresponding figures were somewhat higher; the quantity of albumin was 79.39, fat 54.3, carbohydrate 263.9: the total of heat-units equalled 1,912.5.

The average figure of heat-units per day is $\frac{1402+1912.5}{2} = 1,657.4$. As my weight is 52 kilos., the amount of heat introduced into the system per kilo. and per day is $\frac{1657.4}{52} = 32.2$.

My wife partook during the first test-day 103.19 of albumin, 44.99 of fat, and 204.64 of carbohydrate. The total of heat-units was 1,660.5. On the succeeding day the figures were as follows: 64.03 of albumin, 31.14 of fat, 174.92 of carbohydrate. The total of heat-units was 1,269.29. The average figure of heat-units per day is $\frac{1660.50+1269.29}{2} = 1,464.89$.

As my wife weighs 55 kilos. the amount of heat-units per kilo and per day is therefore $\frac{1464.89}{55} = 26.63$.

My wife, as well as myself, hold our weight, live regularly, and the food taken is not subjected to very great differences; therefore, the figures mentioned may be considered as our average figures. These figures, however, are far smaller than the average given by all authors. This shows what great differences there are in the quantity of food taken by people in their normal condition in order to make up the daily loss. The one maintains his balance at a rate of 26 heat-units per kilo. a day; the other may lose in weight at 30 heat-units per kilo. a day. The scale is the best guide as to whether a certain amount of food is sufficient or not. It shows quickly and with certainty whether the organism maintains its balance or not.

I give here a small table showing the percentage of the three food groups ordinarily contained in most every-day victuals:

Table of the Composition of the most Common Food Substances.[1]

	Albumin.	Fat.	Carbohydrate.
	Per cent.	Per cent.	Per cent.
Cow's milk	4.0 to 4.3	3.0 to 3.8	3.7
Butter	½	90.0	½
Milk soup with wheat flour	5.0	3.25	15.0
Whey (sweet)	0.5	0.3	3.6
Buttermilk	3.0	1.3	3.0
Kumyss (of cow's milk)	3.35	2.07	0.7 lactic acid 1.9 alcohol 0.8 carbonic acid
Cheese (cream)	25.0	30.0	3.0
Cheese	33 0	9.0	5.0
Beef (lean)	18.0	2.0	1.0
Veal	15.5	1.0	..
Sweetbread	22.0	0.4	..
Poultry	22.0	1.0	..
Game	23.0	1.0	.
Meat broth (ordinary)	0 4	0.6	.
Meat juice (pressed)	6.0 to 7.0	0.5	..
Beef-tea	0 5	0.5	
Leube's solution	9.0 to 11.0 albumin + 1.79 to 6.5 pepton		
Oysters	4.95	0.37	..
Egg	12½	12.0	½
Sago	0.5	traces	86.5
Malt extract	8.0 to 10 0	..	55.0
Barley soup	1.5	1.0	11.0
Rice pap with milk	8 8	3.5	28.6
Wheat flour	8½	1½	73.0
Rye flour	10.0	2.0	69.0
Wheaten bread	6.0	¾	52.0
Rye bread	4½	1.0	46.0
Roll	6.82	0.77	43.72
Zwieback	9.5	1.0	75.0
Cauliflower	2.0 to 5.0	0.4	4.0
Asparagus	2.0	0.3	2.5
Rice	5½	1½	76.0
Beans	19½	2.0	52.0
Peas	19½	2.0	54.0
Potatoes	1½	..	20.0
Oatmeal	12.5	5.26	66.77
Barley-meal	8.31	0.81	75.19
Pulverized meat	64.5	5.24	2.28
Pike	18½	½	¾
Salt herring	19½	17.0	½
Caviare	28.04	16.26	7.82
Spinach	3.49	0.58	4.44
Coffee	3.12	5.18	..
Tea	12.38	..	..
Pickles	1.02	0.09	0.95
Meat broth	0.4	0.6	
Beer	0.5	5.25	0.3
Porter	0 7	6.0	0.3

[1] Taken from Koenig, loc. cit., and principally from Munk and Ufflemann, loc. cit.

[1] Munk and Ufflemann: Die Ernährung des gesunden und kranken Menschen. Wien, 1887.

[2] Koenig: Die Menschlichen Nahrungs- und Genussmittel. Berlin, 1883, p. 53.

[3] Von Noorden: Berliner Klinik, Heft. 55.

[4] K. Vierordt: Grundriss der Physiologie des Menschen, 1887, 3. Auflage, pp. 288, 289.

[5] F. Hirschfeld: Berliner klin. Wochenschr., 1893, No. 14.

After this lengthy dissertation on the diet in health, let us return to the sick.

As people with disturbances of the stomach have to replace for their existence no smaller losses than under physiological conditions, they will therefore need: 1. Just as large amounts. 2. The same kinds of food-stuffs as described for the normal state. The only difference possible will have reference to the selection of the various articles of diet and to their form and special preparation.

Thus the question arises, What qualities should the food of stomach patients possess?

In the treatment of a diseased organ one can often make use of two methods. One consists in sparing the diseased organ and giving it perfect rest, the other consists in strengthening the same by methodical adaptation for more work and practice. Both principles are in fact realized in the treatment of diseases of the stomach. The first method is ordinarily applied in acute diseases and only very seldom (and then only for a short time) in chronic affections of the stomach. In these latter the second principle, as a rule, is used. The stomach can be spared, firstly, by not introducing into it any food whatever (greatest degree of saving or rest). Secondly, by administering food substances which, during their stay in the stomach do not impose much work upon this organ, and do not greatly irritate it. Here the main object will be to give the patient easily digestible food. In turning from the saving principle to that of strengthening the organ by methodical adaptation for work, it will be quite natural to change the diet, not suddenly, but gradually, into such as requires more work on the part of the stomach for its digestion. It is therefore absolutely necessary to have an exact table of the digestibility of different foods. In prescribing or changing a diet we shall have to act according to it. Such a scale has been arranged by different authors. The main sign of digestibility was gauged by the rapidity with which the various food-stuffs passed out of the stomach into the intestines. Beaumont in many trials on his patient with the gastric fistula determined the length of time the different victuals remained in the stomach and constructed a scale according to the figures obtained. On the same principle, but more reliable and of greater value, is the scale constructed by Leube, according to the results obtained by emptying the stomach by means of a tube, after different kinds of food had been taken. We think it advisable and useful here to give Leube's scale:

1. *Diet.*—Bouillon, Leube-Rosenthal's meat solution, milk, soft raw eggs, zweiback, English cakes (biscuits containing no sugar), water, natural acidulous waters (Apollinaris, Kronthaler, Seltzer, etc.).

2. *Diet.*—Boiled calf's brain, boiled calf's sweetbread, boiled chicken (young without the skin), boiled pigeon, boiled calves' feet, tapioca pap boiled in milk, beaten white of egg.

3. *Diet.*—Raw beef (chopped very fine), raw ham (chopped very fine), beefsteak (superficially fried in freshest butter), finely scraped tenderloin of beef, mashed potatoes, white bread (stale), coffee with milk, tea with milk.

4. *Diet.*—Fried chicken, fried squab, roast venison, guinea-hen, roast beef (cold), roast veal (leg, saddle), boiled pike, maccaroni, rice pap, finely chopped spinach, asparagus, stewed apples.

These tables, however, have not as yet, on the one hand, been fully verified on healthy individuals, or found always alike (giving the same results); on the other hand, such experiments only show what food remains in the stomach the shortest time. This would perhaps give reason for presuming what food may be easily digested as far as the stomach is concerned, but not what is easier digested as a whole, *i.e.*, made use of for the economy of the body with the smallest amount of work. The digestibility of food substances depends firstly upon their shape and quality: secondly, upon their percentage of convertible material.

"Corpora non agunt nisi fluida," is an old, well-known axiom. Following this law one could arrange the following scale of digestibility, which is constructed according to the different physical conditions of the food:

1. In the first place, food in liquid form: *a*, Liquid at ordinary temperature—milk, meat juice, beef tea, bouillon, peptone or sarcopeptone dissolved in water, bread-water,[1] strained barley, oatmeal, rice-water, strained oyster-soup, egg albumin-water; *b*, liquid at the body temperature—jellies, fruit-jelly, calf's-foot jelly, ice-cream, water-ice.

2. Pulpy form: The food is mechanically converted into very minute particles and well mixed in liquid—pap soups (barley, oatmeal, farina, rice, sago); egg in bouillon; Leube's meat solution, pulverized meat, pulverized crackers in milk, water or bouillon; buttermilk; kumyss; cream; butter.

3. Food which by slight trituration in fluids separates into minute particles: White bread in milk or water; the tips of well boiled asparagus; carrots; mashed potatoes, baked potatoes; the yolk of hard-boiled eggs; oysters (raw).

4. Solid food: White bread, rye bread: meat, hard-boiled eggs, fish, cheese.

5. Substances not easily digested: Meat with tough fibre; lobster; sausages and Swiss cheese on account of their solidity; all substances containing much cellulose, principally when eaten raw; cold slaw; all salads, cucumbers, pickles, raw fruit, apples, pears, pineapple; fruit which contains much acid, therefore all unripe fruit, strawberries; substances containing much sulphur and forming gases in the intestines: all kinds of cabbage, principally white cabbage; beans.

This theoretically constructed scale of the digestibility of food is, at the same time, in the main points, similar to the one which has long stood the test of empiricism and which I ordinarily apply in my practice.

After these general explanations we return to our special subject.

Dietetics in Acute Diseases of the Stomach.—The principle of rest here occupies the first place. In acute gastric catarrh one gives, during the first two or three days, in which, as a rule, there is a total loss of appetite, only very little nourishment in liquid form, containing principally amylacea, barley or oatmeal soup, bouillon, weak tea, water. As a rule, one must not force a patient to take food during the first or even during the second day of sickness. The anorexia in these conditions is a wise arrangement made by nature in order to give the stomach rest. If there is thirst, beverages may be taken in small quantites, and must be neither very cold nor very warm. As soon as the appetite reappears one may give some toasted bread or zweiback, milk, soft boiled eggs or oysters, permitting after a while small quantities of bread and meat, and then passing slowly to the ordinary diet.

Ulcer of the Stomach.—During the rest cure of von Ziemssen-Leube give liquid diet, consisting principally of milk, for two or three weeks. As is well known, Cruveilhier[2] first recommended milk for the purpose, and even now there are some physicians who limit themselves to milk alone. As a rule, however, it is appropriate to allow, besides milk, milk in combination with barley, oatmeal, or rice-water. In addition to this, the different peptone preparations are here in place. I administer Rudisch's sarcopeptone, manufactured in this country, on account of its being palatable and highly nourishing. (The Rudisch's sarcopeptone contains forty per cent. of nitrogenous substances, including twenty per cent. of peptones.)

One may give most appropriately every three hours one to two cupfuls of milk with or without the addition of the above-named decoctions (four times daily) and sarcopeptone (twice daily). The patient must not drink these fluids, but eat them with a spoon. In case of hemorrhage

[1] Bread-water. Stale bread is cut into slices and put in water at temperature of room for from two to three hours, then the water is strained.

[2] Anatomie Pathol. 1829–35.

of the stomach during the first three or four days, it is not permitted to give any food whatever by the mouth; instead, the patient must be fed by the rectum. Ewald has proven that the large intestine has the ability of digesting and absorbing albuminates even without special previous preparation; therefore the following may be given as a nutritive enema.

1. Three to five eggs are mixed with 150 c.c. of sugar-water (30.0 of grape-sugar dissolved in 150 c.c. of water), a small quantity of common table-salt is added, and the whole mixture well beaten: one may add also a small quantity of starch solution or mucilage.

2. One-half pint of milk + 2 eggs + 50 gr. of grape-sugar.

3. One-half tablespoonful of Rudisch's sarcopeptone dissolved in a cupful of water.

The food enemata have to be given three or four times daily. It is necessary that the fluid should be at the temperature of the blood, and that it should be injected by means of a fountain syringe and a soft rubber rectal tube. Each time before giving a nourishing enema a cleansing enema of 250 c.c. of lukewarm water has to be administered, in order thoroughly to cleanse the large intestine and make it more fit for absorption. In case of thirst the patient is allowed to take small pieces of ice into the mouth from time to time. Three days after the disappearance of blood one slowly and cautiously begins the liquid diet.

Dietetics in Chronic Affections of the Stomach.—Whereas, in acute diseases of the stomach, we paid most attention to giving rest to the organ—for here even an insufficient nutrition and the loss of several pounds of bodily weight is not of much importance, as the quickly recuperating organism replaces the losses caused during the sickness by taking increased quantities of food—in the chronic affections it is of utmost and vital importance to see that sufficient quantities of food are taken.

The greatest number of stomach patients consulting the physician, after the disease has been progressing quite a while, have lost more or less weight. The principal reason for this lies in the fact that the body has received too small a quantity of nourishment in order to replace the waste.

The ordinarily insufficient appetite, the early appearance of a feeling of satiation, the pain often appearing after meals, and less frequently vomiting, are the principal factors of subnutrition.

At this point it becomes necessary to divide the patients with stomach troubles into two large classes:

1. Into such with organic lesions of the stomach. 2. Into such with functional disturbances.

The first class comprises, *a*, the malignant diseases of the stomach itself or its orifices (carcinoma ventriculi, cardiæ, pylori); *b*, cicatricial strictures of the cardia or pylorus; *c*, absence of secretory work of the stomach: achylia gastrica.

In this whole first class, with the only exception of group *c*, which lies, so to speak, between the first and second class, we are unable to accomplish much either by treatment or dietetics. In existing strictures of the cardia or pylorus one will be obliged to seek surgical aid. Even in cancer of the stomach-wall the resection of the affected part is advisable whenever the operation is possible. I cannot abstain from calling attention at this place to the splendid results of the recent stomach surgery, which of late has been frequently practised in our own country (F. Lange, N. Senn, R. Abbe, Willy Meyer, McBurney, Weir, and others). In carcinomatous strictures a new passage can be established, either for bringing food into the stomach, by a gastric fistula, or for allowing it to pass into the intestines, by gastro enterostomy. In this way one succeeds at least in temporarily giving these unfortunate ones relief and in ameliorating their nutritive condition. In the cicatricial strictures one is entitled to promise to the patients, nowadays, perfect recovery by undergoing operative treatment. (At the stricture of the cardia a methodical dilatation of same with bougies may sometimes also suffice.) The pyloro-plastic (of Heincke-Mikulicz) and the cardiotomy or cardio-fissure (Abbe) belong to the most beautiful and blessful operations which have ever been practised. After the operation the patients are enabled to eat everything, and to live without any trouble whatever, *i.e.*, they are perfectly cured.

Before the operations, or if such are unfeasible, one will administer light, very slightly irritating nourishment, and always endeavor to make the patient partake of a larger quantity of food. If there is obstinate and constant vomiting, it is necessary to employ nutritive enemata.

Group *c*, achylia gastrica, will be advantageously discussed in regard to diet under Class 2.

The second class of functional disturbances includes the largest number of all dyspeptics. Here stands uppermost chronic gastric catarrh, atony of the stomach, dilatation of the stomach, gastroptosis, superacidity, with or without hypersecretion, nervous gastralgia, nervous dyspepsia, and as an intermediary between the first and second class, achylia gastrica.

It appears advisable to discuss first the whole class, and thereafter to give special rules for the different groups. Liquid food or partly predigested substances (as all peptone preparations) are not in place here. By making the stomach work too little, the weakened condition of this organ is retained and aggravated in time. We must always bear in mind the principle of strengthening the organ by means of appropriate work.

Delafield[1] is said to express himself in his lectures in the following way regarding the dietetics of the dyspeptic:

When a dyspeptic patient asks you the question, "What shall I eat?" reply, "Eat what you like." If he asks, "How much shall I eat?" say to him, "Eat as much as your appetite demands." If he still asks, "When shall I eat?" answer, "Eat when you are hungry."

Although I do not favor strict and severe dietetic rules, nevertheless I deem the above-mentioned remarks as going too far. Unlike the normal healthy condition, in which instinct shows us the right measure to eat, neither too little nor too much, stomach patients very often have lost the feeling of self-regulation, and as a rule partake of too small quantities of food. (Only in a few cases of boulimia there may be an increased desire for food, and in connection with it the quantity of food taken may sometimes be too large.) It is therefore necessary to instruct the patients to eat more, or to give them exact figures of the quantity of food required. As this varies with every individual it is most practicable to let the patient weigh himself once a week and to see whether he keeps his weight. If the patient does not lose any it is the best sign that he takes sufficient nourishment. Besides, we must remind patients to lead a regular life, to eat slowly (how many, especially in our country, sin against this natural law), and to chew well and triturate the food. One must avoid either extremely cold or extremely warm food. Too copious and too complicated meals must be strongly forbidden.

I have made it a rule not to forbid anything, except what is, according to my conviction, obnoxious in the given case. In this way the patients have a great variety in their food and run less risk of subnutrition. Likewise we need not change the number of meals nor the hours appointed unless there should be special indications for such a proceeding.

Among the laity, as well as often among medical men, there are prejudices against certain forms of food. Thus, for instance, until recently one forbade all kinds of fat, even butter, in all dyspeptic conditions. Fat, however, belongs to the group of food-stuffs which has the largest number of heat units, and besides, is not bulky as a nourishment (butter). Undecomposed fat passes the stom-

[1] Cited from Kellog: Methods of Precision in Disorders of Digestion, 1893, p. 4.

ach without molesting the same, and is digested in the small intestines. There is, therefore, no reason for forbidding butter, which should, on the contrary, be highly recommended. Fearing fermentative processes the partaking of bread and other food rich in carbohydrates is very often greatly limited, or even totally forbidden. Although it is true that the carbohydrates easily undergo fermentative processes, those cases, however, in which considerable fermentations exist in the stomach are quite rare, and as a rule are found only where there is considerable stagnation of food in the stomach. In these cases, to be certain, a diet consisting principally of animal albumin (meat) for a short period is very useful. By means of lavage of the stomach and other appropriate treatment one soon succeeds in checking the fermentative processes, and one can then administer carbohydrates.

An adult, according to Koenig,[1] daily consumes one-third to three-fourths kilo. of bread; fifty to sixty per cent. of the total food substances, and fifty to seventy-five per cent. of the carbohydrates are taken in the form of bread. This clearly shows the important part bread takes in diet. Its use is, therefore, as a rule advisable. It is ordinarily said that crust of bread, stale bread, and zwieback are easier to digest, on account of the starch contained in them being largely converted into dextrose. Although I am of the opinion that too fresh bread must be avoided, I, nevertheless, rarely find much difference in the digestibility of the crust or other parts of well-baked fine white bread, judging from experience gained from my own patients.

Articles of luxury (wine, beer, coffee, tea) are, as a rule, permissible. It is, however, necessary to give them in small amounts and in appropriate form. Strong liquors must be avoided, likewise all strong spices.

Appetizers, as a small amount of caviare, sardellen, or anchovies, on a small slice of bread or cracker, taken one quarter of an hour before the meal, are not only allowed but frequently directly commendable.

In reference to the special rules for the different diseases of the second class, we shall have at times to reduce the quantity of meat taken in all conditions accompanied by a diminished secretion of HCl (gastritis chronica glandularis, atony + subacidity); on the other hand, the quantity of richly carbohydrate vegetable food will be increased. Kumyss, matzoon, milk with cognac (7 to 10 c.c. of cognac to 200 or 250 c.c. of milk) may be taken with crackers either during or between meals.

In all the conditions with superacidity the quantity of albuminous food should be increased; here one may give a great deal of meat (venison included). In superacidity with hypersecretion frequent and small meals containing consistent food are most appropriate. If there is a feeling of hunger between meals, the white part of hard boiled eggs may be taken (as is well known albumin combines with acid and makes it, so to say, inert). The quantity of beverages must be greatly limited; most suitable in this instance are small quantities of vichy water. In dilatation of the stomach and in gastroptosis it is also advisable to give small and frequent meals, and to restrict the quantity of liquids taken. As a rule, milk and beer do not agree well in these cases. Small quantities of wine or imported dark beer or porter may be allowed.

In nervous dyspepsia and gastralgia our main object will be to systematically increase the quantity of food—here milk and its derivatives (kumyss, matzoon, bonny-clabber, buttermilk, cream) taken between meals play a great part (Weir-Mitchell Treatment).

In achylia gastrica it is of utmost importance to give liquid or very well triturated (pulverized) food. For here the chemical action of the stomach has entirely ceased, and vegetable (on account of the albuminous membrane enclosing the starch granules) as well as animal food pass from the stomach unchanged, and not converted into small particles, into the intestines and irritate them, unless there has long been formed a sufficient adaptation for these conditions. Vegetable food, on account of its containing chiefly carbohydrates, will be predominant in the diet of this affection. Thus achylia gastrica, in reference to diet, stands midway between the first and second classes. It approximates the first class in so far that it necessitates a liquid or a mechanically minutely triturated or pulverized food, the second class in allowing a richly carbohydrate diet.

Some readers may miss in my paper exact bills of fare for chronic affections of the stomach. They have been omitted, as it is always necessary to individualize, especially in diet. We must guide ourselves more by the patients than by theoretical conclusions. Our main object must be to care for a sufficient nutrition. Only the above-given principal rules on diet must be observed, although at times even they have to be modified. In reference to this point Hippocrates[1] said: "*Dandum aliquid tempori, regioni, ætati et consuetudini.*"

At present, with our more exact knowledge, we have come to appreciate this conclusion to a still greater degree.

107 East Sixty-fifth Street.

[1] Koenig. Die Menschlichen Nahrungs- und Genussmittel. Berlin, 1883, p. 430.

[1] Cited from Munk and Ufflemann, l. c., p. 430.

Progress of Medical Science.

The Absence of Sugar from Normal Urine.—At a recent meeting of the Royal Medical and Chirurgical Society (*The Medical Week*, February 11, 1893), Mr. G. Stillingfleet Johnson pointed out that all human urines exercise some reducing power over cupric salts in boiling alkaline solutions. This fact is particularly well marked in normal non-saccharine urines, if of high specific gravity, because such urines, being highly concentrated, are richer in the normal reducing agents and are the more likely to be pronounced saccharine. He expressed his agreement with Dr. Pavy's assertion that one-fourth of the reducing action of the normal non-saccharine human urine is attributable to uric acid. He had found, however, that by separating the kreatinin from the urine by a method not hitherto described, the urine is deprived of its reducing power. The method in question is the precipitation by means of mercuric chloride, which effects the complete removal of the kreatinin from the unconcentrated secretion by fractional precipitation. The careful estimation of the amount of kreatinin present, together with an accurate estimation of the reducing power of the kreatinin itself, fully account for the reducing power of the original secretion. He then demonstrated the test employed by Schwartz in confirmation of his view that normal human urine is absolutely non-saccharine. It is as follows: The urine is completely precipitated with lead acetate and filtered. The filtrate is rendered alkaline with potash, and a solution of phenylhydrazine is added. The mixture is well shaken and boiled. An orange color is developed, which is followed by an orange precipitate, when excess of acetic acid is added, if sugar be present. Schwartz states, and the author has confirmed his statement, that normal urines give a negative result with this test. He concludes, therefore, that sugar is absent from normal urine.

The Glycosuria of Pregnancy.—It is as well to know that the appearance of sugar in the urine of puerperal women is not, *per se*, to be accepted as evidence of any morbid condition calling for urgent measures. Sugar, in greater or lesser amount, is present, according to Dr. Lewers, in the urine of most puerperal women, but even when comparatively abundant its presence was not associated with the classic collateral symptoms of glycosuria. The amount indeed stands in some sort of relationship to the lacteal secretion, or rather excretion: when the flow is free, whether copious or otherwise, the amount of sugar discoverable in the urine is small. If, however, the output of milk is checked in any way, mechanically or otherwise, a certain proportion of the lactose is elimi-

nated by the kidneys, giving rise to passing glycosuria. Belladonna, probably by reason of its effect in diminishing the excretion of milk, increases the percentage of urinary sugar. It is to be supposed that the glycosuria disappears when lactation comes to an end, but as a matter of fact it has seldom been possible to continue the observations a sufficient length of time to ascertain it by direct examination.—*Medical Times.*

Bodily Position in the Diagnosis and Prognosis of Heart Troubles.—Azoulay, a French writer, has recently issued a brochure upon the influence of posture on the heart-sounds. The idea is not absolutely new, yet no "best posture" for examining the heart is as yet known. The author suggests that what he calls the "raised position" presents fewer disadvantages than others under certain circumstances. The indications thus obtained are more precise, and in these it is possible to discover any heart lesion when it does exist. Practically, the raised position is this: Place the dorsal decubitus absolutely on a horizontal plane, with a hard bolster under the neck, to raise the head only. The arms are then crossed above the head, the knees are raised and kept together, and the heels are brought as close as possible to each hip-bone. This position must be taken without any abrupt movement and without effort on the part of the patient. Oscultation is only practised when complete muscular relaxation has been obtained. This posture has the effect of intensifying heart-sounds and of showing the contractions. The author wisely calls attention to the possible dangers of this position in cases of pulmonary congestion or pulmonary œdema, of acute endocarditis, ulcerative endocarditis, and of degenerative conditions of the heart. Azoulay states frankly that it is impossible to deny the fact that the "raised position" accentuates the normal and abnormal heart sounds and diminishes the heart-beats more than the simple horizontal position, of which it is an exaggeration in point of weight, just as lying down is an exaggeration of the sitting or standing position. The "raised position" causes to appear and to be heard distinctly abnormal heart-sounds that cannot be heard at all when the patient is simply lying down, is sitting up, or standing. The intensity and clearness of these abnormal bruits is increased and brought out as in no other position, for the pulse is usually slowed, and thus it is possible to tell just when the abnormal sound begins.

Vermiform Neuroses.—Other things besides heredity, which is the basis common to neurasthenia, chorea, hysteria, and epilepsy, can serve for the development of nervous disorders. Thermes of Argellès (*Revue Internationale de Bibliographie Médicale*, November 25, 1892) finds that intestinal parasites can also produce sufficient effect upon the cerebro-spinal axis, perhaps by their toxic properties, to bring about definite phenomena that are due to irritation. In subjects without neuropathic antecedents the symptoms are *fruste* and merely have the form of these various classic disorders. When there is a neuropathic taint, it is not to be considered an entity that is either distinct or new. It is a syndrome of inconstant units, a union of symptoms that borrows from other neuropathic states a part of their elements.

Paramyoclonus Multiplex Followed by Psychic Disturbances.—In the *Bulletin Médical du Nord*, September, 1892, Lemoine, of Lille, gives the record of a case of paramyoclonus multiplex in which there existed a peculiar mental state similar to that sometimes present in chorea, with tendencies to echolalia and ecokynesia, such as occur in persons suffering from the "maladie des tics" that has been described by Guinon and Gilles de la Tourette. Paramyoclonus, the author asserts anew, belongs to the choreas and is a near relative of electric chorea and the "maladie des tics;" true neurasthenia, hysteria, chorea, or epilepsy may follow the presence of intestinal parasites. The successful treatment of the intestinal difficulty cures or greatly ameliorates these nervous manifestations.

Thiosinamin.—This substance, according to the *Semaine Médicale* for September, 1892, is found to be useful in lupus. In this affection it produces a local reaction without influencing the organism in general. After this local effect, which lasts several hours, there is desquamation of the parts affected. In a few weeks there is marked improvement. Thiosinamin exerts a beneficial influence upon cicatricial tissue, which it softens. The drug is made from crude mustard treated with absolute alcohol and ammonia. It is also called ally-sulpho-carbamid.

Clinical Department.

EXTERNAL URETHROTOMY.

THE REPORT OF EIGHT OPERATIONS AND OF AN UNPLEASANT COMPLICATION MET WITH IN ONE OF THEM.[1]

BY B. MERRILL RICKETTS, M.D.,

CINCINNATI, O

THE object of this report is unlike the paper of Buxton Browne in the issue of the *British Medical Journal* of November 26, 1892, in that it will attempt to prove that there are strictures through which sounds or bougies of any character cannot be passed into the bladder. He says in this paper, "I will attempt to prove that the worst cases of urethral strictures can be treated *tout d'un coup*, that is, all at one operation, and put at once into a satisfactory state without any painful preliminary instrumental treatment and without any perineal incision, and only detained in bed for some less time than a fortnight."

With reference to Syme, the so-called Napoleon of surgery, I will add that his views on urethral strictures are valuable and give evidence of his having closely observed the various forms and conditions which the urethra may undergo: but when he states that if urine comes out from a bladder through a urethra, a surgeon should be able to pass an instrument through that urethra into the bladder, I must say that I hesitate to accept them.

Dissecting-room specimens have fully demonstrated that the urethra may be entirely obliterated. This perhaps is more especially so in cases of trauma, where the urine has escaped through fistulæ posterior to the injury. It may also occur from abscess or any inflammatory process which destroys the mucous membrane. Then there are cases where the urine dribbles at times often enough to relieve bladder distention, but not enough to ever allow the bladder to become evacuated. I think there are surgeons of equal experience with Mr. Browne and Mr. Syme who would be as unwilling as myself to accept their statements. I, myself, call to mind two cases where it was impossible to introduce the groove director. I consider the dangers attending the manipulation of instruments about a tight stricture far greater than those accompanying an external urethrotomy, unless it be in the extreme posterior portion of the membranous portion of the urethra. Then again we are called upon to evacuate the bladder of patients after they have been allowed to go for two or three days, perhaps not more than one day, where it is impossible to introduce a catheter of any size. I think it is far more rational surgery for a surgeon to make an external urethrotomy under these circumstances than to use a trocar in any way whatever. I believe that the introduction of a trocar into the bladder to relieve distention due to a tight urethra is a thing of the past.

In my own experience there have been but two cases where it was necessary to relieve the bladder in this way, and I found a condition of the urethra that would at once convince any fair-minded man that it would have been impossible to have entered the bladder in a natural way. In the remaining five cases the presence of fistulæ demanded the operation. I do not feel that I can say anything that would throw any light upon the subject that has not been reflected from other sources. I do, how-

[1] Read before the Walnut Hills Medical Society, April 12, 1893.

ever, believe that the foregoing complications will especially interest those who perform the operation.

On August 13, 1891, A. F——, aged thirty-eight, was referred to me by the late Dr. H. T. Lowry, with an urethral stricture in the membranous portion which would not admit of any size sound or filiform bougie. Many attempts were made to pass a sound of some size, but it was found impossible. He could not pass his urine, and it was advised to make an external urethrotomy at once.

He had given the history of stricture of about seven years' standing; during this time he had frequent attacks of retention, which were relieved sooner or later by hot applications and recumbency. There was dribbling most of the time, showing that the bladder was greatly distended the greater part of the time. The anæsthetic (chloroform) was given by Dr. Lowry without any trouble whatever. An incision was made over the obstruction, and it was found that it was impossible to pass even a groove director through the urethra. I followed the irregular channel as best I could, but was soon lost and compelled to work in the dark. At this stage of the operation the patient gave great resistance and was about to come from under the influence of the anæsthetic. The bladder was at once entered and a great quantity of urine escaped. In the meantime, however, there was considerable hemorrhage from the branch of the deep pubic artery. I found that it was under the arch of the pubis, and that it was impossible to take it up with the hemostatic forceps. Dark overtook me, and I felt that my patient would not rally from the chloroform and the loss of blood, unless something was done at once to check the hemorrhage. I placed my finger over the artery and found that pressure controlled the bleeding. The patient was now allowed to come from under the influence of chloroform, which he did very nicely. I kept this pressure upon the artery until I was satisfied that it was the best way to control the bleeding.

My assistant, Mr. A. E. Gillette, relieved me and held his right index finger upon this artery for four hours without removing it. This is the first time that I have ever heard of any person making pressure with the index finger for so great a length of time. As I was compelled to leave the city during the night, Dr. C. T. Phythian was called in and rendered the same kind of service until morning, when he ventured on packing the cavity with sponge. The hemorrhage by this time had about ceased. The patient's temperature at seven o'clock next morning was normal, pulse 85, and he had smoked a cigar during the night. Hemorrhage did not occur after this hour, and the patient's recovery was uninterrupted until about the fourth week, when I found it necessary to make a secondary operation. He left my private hospital about the end of the eighth week with a small fistula, which afterward became closed.

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A NEW METHOD OF AUSCULTATORY PERCUSSION.

By ANDREW H. SMITH, M.D.,

NEW YORK.

I have recently employed a form of auscultatory percussion which I believe to be new, and which will sometimes aid in detecting shades of differential dulness not easily determined by ordinary methods.

In carrying it out the binaural stethoscope is fitted with the small extremity intended for examining the heart, but this, instead of being applied to the chest, is held between the patient's teeth, and the lips are closed around it. During the percussion the nostrils are compressed with the fingers.

It will be seen that in this method there is a confined column of air reaching uninterruptedly from the interior of the patient's lung to the drum-membrane of the examiner's ear. Impulses communicated to this column are completely shut in, and none of the sound-waves are lost. The length of the sound-waves will be in proportion to the elasticity of solid structures acted upon by the percussing finger. If there is no solid tissue beneath to dampen the vibrations of the chest wall, the waves will be long, the pitch low, and the tone resonant. If, on the other hand, the vibrations are muffled by deposit in the lung, the waves will be short, the pitch high, and the tone flat and woody.

The effect does not differ in kind from that obtained in ordinary percussion, but its intensity is much greater.

In examining the back of the chest a stethoscope with unusually long tubes is necessary, or in the absence of this the percussion may be made by an assistant.

NEW YORK, April 25, 1893.

EIGHT CASES OF MEASLES WITH SEPTIC SYMPTOMS.

By FRED. J. BOHLAND, M.D.,

BELLE PLAINE, MINN.

That measles or any of its complications may prove rapidly fatal in children, is a fact known to every physician, unknown to most mothers. But that measles may endanger the life of adults and prove equally fatal, the following history conclusively shows:

The H—— family, well-to-do farmers, who appreciate money much more than hygiene or health, called on me for some remedy to cure an eruption accompanied by fever. Refusing to grant their wish without seeing the patients, I was asked to see them the next day.

I found four beds in one room, in each bed a patient suffering from morbilli, well-marked eruption being present; pulse 120 to 145, and temperature 104° to 105° F., varying to that extent in the different patients. The atmosphere of the room was abominable. The family history showed a rheumatic diathesis. One brother and one sister had died of chronic rheumatism during the last two years, and another brother was suffering from the same disease. I ordered the usual expectorant, antifebrin, and tepid sponging. I also quarantined the house. During the next four or five days no change was observed, and the temperature and pulse remained high. One of the patients, aged twenty-eight, recovered slowly and is well to-day, barring a slight attack of subacute articular rheumatism.

The second, a boy aged twenty-one, remained with a pulse of 120, and temperature of 101° to 102° F. Repeated examinations revealed dulness on percussion over the left side. The vocal fremitus was feeble, and later was absent. Vocal resonance was absent. Auscultation showed at first feeble, and later no vesicular murmur. There was slight cough. Diagnosis: fluid in pleural cavity. Aspiration in seventh intercostal space showed the presence of pus. Dr. Arnold Schwyzer, of St. Paul, and myself resected part of the seventh rib, daily washings being practised. The patient is doing well to-day and has practically recovered.

Louise, aged eighteen, never lost the high temperature, showed early symptoms of lobular pneumonia and meningitis, and died in a comatose condition on the fourteenth day.

Miss Anna, aged twenty-two, slowly recovered, the pulse remaining high and weak, and there was a murmur over the apex during systole. Diagnosis: endocarditis.

A brother of the patients, living one mile away, carried the disease to his house. Both of his children, and his sister, keeping house for him, were taken down with measles, resulting in the death of one child, aged six months, and that of the sister, aged twenty-four. They were attended by another physician, who diagnosed measles followed by pneumonia, death resulting from heart failure.

A neighbor's child, whose father had visited the patients, was also taken with measles and died of meningitis ten days after the appearance of the eruption. These patients were the only cases, excepting one other adult, in whom the disease occurred, and every patient showed

symptoms of septic complications. Although the hygienic surroundings were remarkably poor, I cannot admit that they alone were the cause of the severe attacks. I am inclined to think that there was a septic poison particularly virulent, at least more so than ordinarily found in measles, and I have simply quoted the above cases to show how virulent the specific poison of measles may be, and how the same septic matter may cause a variety of diseases.

ADHERENT PLACENTA AND INVERSION OF THE UTERUS.

By W. B. VANDERPOEL, M.D.,

NEW YORK.

Mrs. Q——, aged twenty-seven, multipara, was taken with labor pains on April 26, 1893, about 6 P.M. She was seen by Dr. Eleazarian for me at 11 P.M. He found that the membranes had ruptured, but there was a complete cessation of all pains at that time. Pains returned an hour later and the head was born by 2 A.M.

April 27th.—R. O. A. Again all pains ceased and considerable force was required to extract the body, which was very large. The child, a male, was livid and required the unremitting attention of Dr. E—— for twenty minutes. When full respirations had been established in the child and the doctor came to give his full attention to the mother he found the uterus had contracted irregularly and he was utterly unable to remove the placenta by expression or to introduce the hand. When I saw the patient a little later, the condition remained the same, there was no hemorrhage to speak of. She was chloroformed and the hand introduced past the lower segment of the uterus, when it came in contact with a firm constriction through which the cord could be traced into the dilated right side of the fundus. By firm pressure the constriction was finally overcome and the placenta reached. It was found firmly adherent over its entire extent and was peeled off with much difficulty. The hand, with the placenta in its grasp, was slowly withdrawn, care being taken to cause as little suction in this movement as possible. On reaching the vulva I found the uterus had become inverted and followed the hand down. Again introducing the hand and making firm pressure on the inverted fundus it was gradually reduced. Patient recovered from chloroform nicely. 7 P.M.—Patient has been quite comfortable since last visit, passed urine without trouble.

April 28th, 1 P.M.—Temperature, 101¼° F.; pulse, 120. There has been considerable hæmorrhage; douched. 8 P.M., temperature, 102° F.; pulse, 118. Much pain and tenderness complained of in the uterus. Ordered Quiniæ sulph., gr. iij., in pill every two hours.

℞. Morphiæ sulph..... gr. ½.
Ex. belladon..... gr. ij.
Pulv. iodoform..... gr. xxx.
M. et div. in suppositoriæ No. vi.

Sig.—One every three hours. Douched with sol. acid. carbolic. (1 to 40) intra-uterine.

April 29th, 12 M.—Temperature, 102¼° F.; pulse, 100. Intra-uterine douche: lochia scanty. Heavy feeling in head. 7.30 P.M.—Temperature, 103⅕° F.; pulse, 110. Intra-uterine douche. Feels easier over uterus, suppositories stopped. Quinine pills continued.

April 30th, 11 A.M.—Temperature, 100° F.; pulse, 90. Lochia still scanty and straw color; douched. Bowels moved with ol. ricini. From this time on the puerperium was uneventful. The lochia still continues now that she is up and about, but very scanty and straw color.

The two points of interest to me were the early temperature, probably due to metritis and local peritonitis and the scanty lochia. In her previous confinement, October, 1891, the placenta was adherent and had to be pulled off, but was not difficult: the irregular contraction of the uterus was the cause of the great difficulty in this case.

A BROKEN CATHETER IN THE BLADDER RECOVERED BY A FORTUNATE ACCIDENT.

By CHARLES C. RANSOM, M.D.,

NEW YORK.

On the afternoon of March 12, 1893, Mr. S—— called at my office for relief from an accident which had befallen him, and which he described to me as follows:

For some time past, on account of several strictures of the urethra, he has been obliged to use a catheter, which for convenience he carried in his pocket. Before leaving his house, some two hours ago, he wished to use his catheter but found that he had lost it out of his pocket. As his desire to void his urine was quite urgent, he bethought himself of an old English gum-elastic catheter which he had discarded, and which had lain in his room for some time and was dry and cracked. In order to facilitate its introduction he put in the stillette, and passed it into the bladder and drew off his urine with little difficulty.

Upon withdrawing the catheter he was surprised and greatly alarmed from the fact that only part of it came away, the other portion, six and one-half inches in length, having remained in the urethra. He immediately grasped the penis, hoping by manipulation to work the piece out, but found that he only forced it farther into the bladder until at length it was lost to the touch entirely. The presence of the catheter in the bladder gave him some pain, which he thought came from not having entirely emptied the bladder of urine, and to relieve himself he went out to the drug store, purchased another catheter and again tried to draw his water. He was unable, however, to pass this one beyond the strictures, and after several ineffectual attempts, in which the urethra was lacerated so that there was considerable hemorrhage, he gave it up and came to me for help. When I saw him there was a slight dribbling of urine, which was more or less mixed with blood from the lacerated urethral wall. I did not think it wise to make any attempts at removal or needlessly subject the urethra to further injury, for I felt that, owing to the strictures, nothing short of an operation would be of avail. I therefore gave him a letter to a genito-urinary specialist and advised Mr. Z—— to see him without delay. On the following morning Mr. Z—— again presented himself at my office and to my great surprise handed me the piece of catheter of the full size as above stated.

He said that upon leaving my office the day before, the irritation was so great he felt that he must relieve it at any cost. He returned home and again attempted to introduce the catheter which he had purchased. After many fruitless efforts, attended by a great deal of pain, he gave it up in despair. Upon withdrawing the catheter he found, to his great astonishment, that he had removed both together, the new one having telescoped the piece which had been retained. Although the catheters were originally of the same size (No. 7) this was made possible from the softening and swelling of the retained piece owing to its prolonged immersion in the urine.

152 West Forty-Eight Street.

The Effect of Coffee on the Lacteal Secretion.—Dr. Alice McLean, writing in the *Medical and Surgical Reporter*, says that in an institution of which she had charge recently, in which there were some thirty or so nursing women, coffee was served twice a week. Regularly upon these days the nurses in charge reported a scarcity of breast-milk, and there was frequently a necessity for resorting to artificial feeding to eke out. The author suggests that in the lying-in period, and at the time of weaning, when the breasts secrete more milk than is wanted, and when the mother is abstaining from fluids, her thirst might be quenched with coffee with good result.

Four Thousand Students are in attendance in the various departments ot the University of Michigan.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHERS

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New York, June 17, 1893.

A PLEA FOR MORE DISPENSARIES.

A SHORT time ago we referred to a carefully prepared article upon our city dispensaries which appeared in the *Evening Post*. This article was devoted chiefly to an investigation of the amount of free dispensary service and the nature and distribution of the work. It was shown that the records furnished a total of 628,486 cases treated annually and representing 452,329 individual patients. In the *Post* of June 17th is a second article, in which the subject is studied from a somewhat different point of view.

The tenement-house population of New York, plus a floating contingent of visitors, boarding-house lodgers, and immigrants, amounts to about one million four hundred thousand. This number includes all the wage-earning, small salary, and indigent class. If the dispensary contingent came from them alone, then one in every three must be ill annually. But, as a matter of fact, vital statisticians find that only about one in every eight persons is sick annually. Hence, either the *Post's* estimate represents duplications or the well-to-do class, of about five hundred thousand, is a large factor in the dispensary work. The latter supposition accords much more with experience.

There are 3,305 physicians practising in New York City. This means one physician to about 170 persons of the class above the tenement-house population.

The writer proceeds to give a description of the workings of the Good Samaritan (formerly the Eastern) Dispensary. There is nothing in this of especial interest. He concludes, however, with a plea for dispensary work and its further extension. "In addition," he says, "to the class whom self-interest prompts to the restriction of dispensary privileges, and that other which would extend it for purposes of exploitation as a means to advancement in the profession, there is still a third class of physicians who seek to promote and extend the operations of these centres of medical relief as a defence against the exactions of charity service in their private practice. Doctors in the front rank are little troubled by the poor, but many somewhat below the first line are severely taxed in this direction. Said one of this class: 'I meet those in the profession who contend that the liberality of our dispensaries is doing us an injury. But, for my part, I regard them as agencies of relief to us. It makes little difference whether we regard the "frauds" or the worthy poor, the fact that anyone is willing to pass the ordeal of the dispensary is proof either of a want of money or that it is held very tightly, and in neither instance is a fee easily collected. If only as a relief to the profession, therefore, I should advocate the extension of the practice, already somewhat in vogue, of attaching a staff of visiting physicians to each dispensary. If the principle of providing the poor with free service at dispensaries is sound, no argument except that which takes account of expense can be urged against a free service at their homes. Indeed, when it is considered that dispensaries are visited on the most trifling account, while the sickness that confines the patient to the house is presumably serious, the visiting side of this work appears by far the more important and desirable; and why this side of the work receives no greater attention is clearly because it offers only slight means of advancement to the profession, as compared to the clinic, and, therefore, having no self-interest to stimulate it, depends for its development largely on the humanitarian promptings of the community.'"

Further arguments are offered to show that the congested condition of our hospitals should be helped by an extension of the system of visiting physicians to the poor. This kind of work, he thinks, is not extended or encouraged as it should be. The writer does not seem to be aware of the fact that the visiting physicians attached to our dispensaries are now, as a rule, paid. Their work enables them to form acquaintances and extend practice. The positions are readily filled and the criticism that this class of work is not encouraged or efficiently attended to already is incorrect. The trouble is, we venture to say, that the work involves paying the doctors, and dispensaries do not have enough money to do this on any great scale. Some arguments may be offered against its wide extension also unless the method is changed. The plan of paying a physician so much a month for medical service is a poor one unless the pay is good. For $20 a month, one will get just about the equivalent of that amount in medical service, and rarely any more. The exacting demands of an epidemic or a large number of serious cases cannot be met with it.

The argument that dispensaries afford a relief to physicians is sound up to a certain point. This is a statement which no one has ever denied. But when dispensaries reach the stage that all are encouraged to come in, what might be a relief becomes an oppression. As a matter of fact, the existence of an excessive and elaborate dispensary supply gradually educates many families to the belief that ordinary medical service need not be paid for. The history of the pauperization of the West side by the Vanderbilt Clinic is an illustration of this and would form an instructive chapter in social economics.

A MEDICAL BOARD RESIGNS.

THE Medical Board of the New York Infant Asylum have, with one or two exceptions, resigned. The action was taken on the ground that the Board were denied the right granted to Boards of other hospitals in the city, viz., that of nominating to the Managers the physicians who are to be appointed on the Medical Board. We learn that on the first of January a gentleman who had faithfully performed his duties as visiting physician was dropped and a new man quite unknown to the Board was

appointed in his place. Some respectful protestations were made, to which an insulting reply was given by one of the Managers. After some fruitless attempts at an amicable adjustment the resignations were sent in.

We deprecate the practice of resigning, as a rule. The governors of our larger and more reputable institutions are generally reasonable men, and they desire to do justice to the physicians and accede to their reasonable requests. In this case, however, we do not see that any other course could be taken by the Medical Board; furthermore it is difficult to see how any self-respecting physicians can take their place. For in order to do so, they must accept complete subservience to the Managing Board, who can turn them out at any time without cause and who can appoint as their associates any persons, however despicable. Such a position is not and would not be tolerated by any board of visiting physicians, however great the attractions of the service. The work at the New York Infant Asylum is arduous and attended with little *éclat*.

An instructive comment on the attitude of some managing boards to the medical profession was shown in this connection. When the President of the Board learned of the resignations, he said to a reporter, that "he did not care a picayune" about the resignations; as he could get others just as good to take their place. Among the gentlemen on the Board who resigned are, Drs. George T. Harrison, H. Marion Sims, Egbert H. Grandin, L. Emmett Holt, C. C. Rice, C. L. Dana, W. R. Townsend, G. Clarke Thomas, Oren D. Pomeroy, George T. Elliott, George B. Fowler, Seneca D. Powell, and H. C. Coe.

We shall watch with interest for the list of gentlemen who accept the positions thus vacated.

THE BORDEN TRIAL.

The trial of Lizzie Borden, which ended this week with the acquittal of the defendant, has engaged the attention of the whole country, by reason of the extraordinary brutality of the crime and the mystery connected with its perpetration. The details have been made familiar to everyone. Some expert testimony was introduced, but this was mainly of a negative character, and did not involve any especially interesting points. The prosecution apparently tried to make out that a young woman of previously good character and quiet habits had hacked to death her father and stepmother. It is the general opinion, we think, that the chain of circumstantial evidence which was fastened about her was not strong enough to justify a conviction.

Miss Borden being removed from the list of possible criminals, the theory—where any theory is held—is that the deed was done by some cunning maniac. If so, it must have been a person who had an insane lust for murder and who would be put in a similar class with "Jack the Ripper." If there be such a person, he or she is living yet and will most likely be heard from again. The acts of such criminals, however, are as a rule unlike those of the Borden case, for there is either some sexual or religious perversion, or, at least, some insane emotion connected with them. The theory of an unknown maniac is, therefore, not a very strong one. There is, in fact, no very strong theory, though that of the prosecution was at one time the most plausible.

FEES FOR MEDICAL SERVICE TO MILLIONAIRES.

The two physicians who attended Mr. John W. Mackay, the California millionaire, in his recent illness, have sent in bills for $5,000 and $7,500, respectively. Mr. Mackay refuses to pay them on the ground that the sums charged are exorbitant. We do not know the amount of service rendered, but if the rates exceeded the maximum fees, and if an extra sum was added, as is alleged, because Mr. Mackay is a multiple-millionaire, our sympathies are with him. A physician has no more right to treble his fees because a man is rich than has a tradesman to treble the price for his wares. There are circumstances, however, when the service rendered is so directly saving of life and suffering, and where the attendance involves so much responsibility both for the life of the patient and the reputation of the surgeon, that it is difficult to say what should be the fee. Ordinary rules and rates do not apply here.

News of the Week.

An Academy of Medicine for Brooklyn.—The name of Dr. Cornelius N. Hoagland, who made a fortune in the manufacture of baking-powder, has long been held in high esteem by his fellow-physicians by reason of his generous gift of funds to found the Hoagland Laboratory at the Long Island College Hospital, the privileges of which are freely opened to all members of the medical profession in the city. He has now offered $50,000 toward putting up a building which shall furnish headquarters for the various medical societies of the regular school in the city, provided they secure a like sum. The Kings County Medical Society, which has some five hundred members, secured the passage of a law last winter permitting it to hold property worth $100,000, and it is probable that the title to the property will be held in its name. A central site will be secured, probably in De Kalb Avenue, near the Brooklyn Hospital and near the meeting-places of the various societies which will use its privileges. The effort is to be made to organize an academy of medicine as a central body, composed of representatives from all those interested in the work to be carried on in the new building.

The Pasteur Institute has been removed from West Tenth Street to its airy and capacious new quarters facing Central Park at West Ninety-seventh Street. The building is a model structure, erected expressly for the purposes of the institute. It is six stories in height, and has a frontage of 26 feet on Ninety-seventh Street and 100 feet on Central Park, West. On the roof there is a superstructure of iron, where animals used in obtaining virus for inoculations will be kept.

New York's Milk Supply.—The inhabitants of New York consume, it is said, a great deal of beer, and a reasonable amount of Croton water, but they do not neglect milk. Over 900,000 quarts are delivered daily, making an annual consumption of 329,500,000 quarts, or 82,325,000 gallons.

The Medical Society of New Jersey.—The one hundred and twenty-seventh annual meeting of this Society will be held in the West End Hotel, Asbury Park, on Tuesday and Wednesday, June 27 and 28, 1893.

The New York Society of Dermatology and Genito-urinary Surgery was organized on May 24th last, and elected the following officers: *President*, John A. Fordyce, M.D.; *Vice-President*, F. Tilden Brown, M.D.; *Treasurer*, C. C. Ransom, M.D.; *Secretary*, John P. McGowan, M.D.

The New York Electro-Therapeutical Society was reorganized Friday evening, June 9th, and elected the following officers: *President*, Dr. W. J. Morton; *Vice-President*, Dr. Augustine H. Goelet; *Secretary and Treasurer*, Dr. O. S. Phelps. The next meeting will be held in October.

Medico-Chirurgical College, Philadelphia. — Dr. L. Webster Fox has been elected Professor of Ophthalmology in the Medico-Chirurgical College of Philadelphia.

Dr. W. Harvey Reed, the treasurer of the National Association of Railway Surgeons, was the guest of the Medico-Legal Society of New York, at the Hotel Imperial, on the evening of June 14th. He presented an able and highly interesting essay on "The Present Status of Railway Surgery in America." It was ably discussed by many members of the New York bar and medical profession present. The following day he spent with Dr. Thomas H. Manley, visiting the hospitals and witnessing several surgical operations at the Harlem Hospital.

A State Board of Health Upheld.—The Iowa Supreme Court has just decided the long-contested case of the Iowa Eclectic Medical College *vs.* the Iowa State Board of Medical Examiners. It was an action in mandamus to compel the board to recognize the college and grant certificates to graduates thereof, the board having refused on the ground that in its teachings and appliances the college did not come up to the requirements and standard fixed by the board. The plaintiff college claimed that the board had no power to fix the standard of a medical college, and that the statute was void in that respect; that the action of the board was had when there was no eclectic physician on the board, as required by statute in such cases, and, therefore, the action of the board was void. The court decides that the law is constitutional and valid, and that the board has the power to fix the standard of medical colleges, and that there is nothing in the statute requiring that any particular school of medicine shall be represented on the board.—*Medical Standard.*

Professor Jacob Moleschott, the celebrated physiologist of Rome, died on May 27th, aged seventy-one. He was for a time Professor in the University of Turin and a Senator of the kingdom.

Legal Effect of Accepting an Amount Less than Bill Rendered.—It is a general principle of the law that where a demand is liquidated or fixed, and the liability of the debtor is not in good faith disputed, the acceptance of a less sum than is the creditor's due will not, of itself, discharge the debt, even if a receipt in full is given. In such case the element of a consideration is lacking, and the obligation of the debtor to pay the entire debt is not satisfied. Unfortunately, however, this rule is denied application to bills rendered for medical services, according to a decision of the Court of Appeals of New York, in Fuller *vs.* Kemp. Here a physician made out a bill for $670 for medical services, in settlement of which a check for $400 was sent to him, and stated to be in full satisfaction. This was retained, credited on the account, and a bill for the balance rendered. The person charged thereupon again wrote the physician, calling his attention to the express condition upon which he had forwarded the check, and that it was sent as payment in full satisfaction of the latter's claim for professional services to date; that he did not recognize his right to retain the amount so offered and repudiate the condition of the offer; and requested him either to keep the money upon the condition named, or return it to him by first mail. To this letter the physician made no reply, but kept the amount of the check, and after the expiration of nearly a year brought action for the recovery of $270, the balance of his account after applying the $400 received. Under such circumstances the court said that no further recovery could be had.—*Journal of the American Medical Association.*

Health Commissioner of St. Louis.—Dr. George Homan has been elected Health Commissioner of St. Louis, to fill the vacancy left by Dr. Brennan, who recently held that important office.

President Carnot has had an attack of appendicitis complicated with cardiac troubles.

Scarlet Fever is epidemic in London, all the hospitals are filled to overflowing.

Daniel's Texas Medical Journal has changed its name to the *Texas Medical.* A rose by any other name is just as red, and we understand that the *Texas Medical Journal* will continue to add to the joy of living, in the same vermilion tints.

The Louisville Medical College has just erected a new college building.

Diseases Peculiar to Women.—Some time ago many physicians, and probably many more of the laity, received cards announcing that a certain Dr. Sara Chase would lecture at Chickering Hall on diseases peculiar to women. Recently this person was convicted of manslaughter and sentenced to imprisonment for nine years. She was found to have produced an abortion, and the patient died from its effects.

Circular of Information Concerning the Use of Bacterial Cultures by the Health Department for the Diagnosis of Diphtheria.—Recent investigations have shown, that a considerable proportion of pseudo-membranous and exudative inflammations of the throat and upper air-passages, commonly considered as diphtheria, and having the anatomical appearances found in diphtheria, are not true diphtheria. These cases may be called false diphtheria.

It has also been shown that a considerable number of cases considered to be false diphtheria are really true diphtheria. While in true diphtheria the mortality is very high and the danger of transmission to others is great, in false diphtheria the mortality is low and the danger of infection slight. The differential diagnosis between true and false diphtheria can be made by bacteriological examinations within twelve hours, while without their assistance it is difficult or impossible.

The Health Department is now prepared to make use of bacterial cultures for diagnosis in all cases of suspected diphtheria occurring in the city, and desires that in every case either the physicians should themselves make the inoculations, or should authorize an inspector to make

them. They should be made in every suspicious case at the earliest possible moment. It is only in this way that the full benefit of a positive diagnosis is obtained, for during convalescence the specific organisms often disappear from the throat. The inoculations are made by gently rubbing a cotton swab against the throat, and then drawing it over the surface of the culture-medium. When the physician desires to himself make the culture (and this is usually the better plan, for it can be done earlier and is more agreeable to the family), he can obtain, free of cost, a culture-tube and swab, and the simple directions necessary for their use, at any one of the druggists whose addresses are given in the circular. After the inoculation the tubes are to be returned at once to the druggist from whom they were obtained. The tubes will be collected by the department every evening. If, on the other hand, the physician desires an inspector to make the inoculation, he is requested to state this when the notification of the case is sent to the department. The diagnosis will be ready in every case by noon of the following day. The attending physician can obtain this immediately by telephoning to the Laboratory (1191 Spring), or when this is not done he will be notified by mail. Cases which prove to be false diphtheria will not be visited by the department. Cases, on the other hand, which prove to be true diphtheria will be subjected to the usual rules and regulations covering contagious diseases.

The Medico Legal Society of Chicago, at its annual meeting, held June 10th, elected the following officers: *President*, Dr. D. R. Brower; *Vice-Presidents*, Drs. James Burry and C. D. Wescott; *Treasurer*, Dr. Joseph Matteson; *Secretary*, Dr. Archibald Church.

Yale University Medical School.—The annual address in medicine will be delivered by Dr. Henry P. Walcott, of Cambridge, Mass., in Battell Chapel, on Tuesday, June 27th, at 12 o'clock noon. The title of the address will be "The Profession, the Colleges, and the Commonwealth."

Reviews and Notices of Books.

Human Anatomy. A complete systematic treatise by various authors. Edited by Henry Morris, M.A., and M.B. Lond., Surgeon to and Lecturer on Surgery at Middlesex Hospital, etc. 8vo, pp. 1286. Philadelphia: P. Blakiston, Son & Co. 1893.

Following the fashion of the day, this volume has a joint authorship of special parts and gives a novelty to the study of anatomy, which enhances its value as a text-book.

It is divided into ten sections, under the following anatomical divisions, viz: Osteology, the articulations, the muscles, arteries, veins, and lymphatics; the nervous system, organs of special sense: the thorax, including the organs of voice, respiration, and circulation; the organs of digestion: the urinary and reproductive organs; and surgical and topographical anatomy.

These are studied in their natural and practical order on the basis of anatomical dissection, making a consistent whole of the fundamental principles and essential details of structure and arrangement. The illustrations are profuse and well executed, numbering in all seven hundred and ninety-one woodcuts, two hundred and fourteen of which are in colors from original sketches. While it must be admitted that there can be scarcely anything new in descriptive anatomy, it is refreshing to notice a departure in the arrangement and treatment of this subject which is practical, useful, and interesting. In a word, the natural method is adopted, and several new features of illustration are introduced. For instance, the origin and insertion of muscles with exact areas of attachment are noted in different colored outlines, red for the former, and blue for the latter. Thus the reader is enabled at a glance to discriminate in the case of a given bone the difference between the two points, and obtain thereby the direction and extent of action of each muscle. A similar principle is carried out in other parts of the work, which makes the illustrations for the most part unique and invaluable, the schematic drawings especially demanding attention and commendation in this connection. The work as a whole is filled with practical ideas, and the salient points of the subjects are properly emphasized. The surgeon will be particularly edified by the section on the topographical anatomy, which is full to repletion of excellent and useful illustrations. The only objection that can be urged against the work is the thin and poor quality of paper used.

History of the Life of D. Hayes Agnew, M.D., LL.D. By J. Howe Adams, M.D. 8vo, pp. 376. Philadelphia and London: F. A. Davis.

This is an interesting and well-written life of the great Philadelphia surgeon by one who evidently knew him well, and who thoroughly appreciated his excellent qualities. The discipline of struggle and the triumph of work are strikingly exemplified in the life of the subject of the sketch, and will serve as useful lessons to the rising generation of medical men. The portraits are admirably executed.

Mineral Springs and Health-resorts of California, with a Complete Chemical Analysis of every Important Mineral Water in the World. By Winslow Anderson, M.D., M.R.C.P. Lond., M.R.C.S. Eng., Joint Editor and Publisher of Pacific Medical Journal. 8vo, pp. 384. San Francisco: The Bancroft Co. 1892.

This work is a prize essay before the Medical Society of the State of California, and virtually exhausts the subject of which it treats. It will be found to be an invaluable contribution to balneotherapy, and will doubtless be appreciated accordingly.

Proceedings of the Philadelphia County Medical Society. Vol. XIII. Lewis H. Adler, Jr., M.D., Editor. 8vo, pp. 527. Philadelphia. 1892.

This volume is uniform with the preceding series, and contains a varied amount of interesting material carefully and judiciously edited. The membership of the Society being composed of the leading representative men of the locality, gives this volume a peculiar merit.

Handbook of the Diagnosis and Treatment of Diseases of the Throat, Nose, and Naso-pharynx. By Carl Seiler, M.D., Instructor in Laryngology and Lecturer on Diseases of the Upper Air-passages, University of Pennsylvania. 4th Edition. 12mo, pp. 412. Philadelphia: Lea Brothers & Co. 1893.

The fourth edition of this work is up to the required standard, which is the highest for one of its scope. It is concise and practical, treating of the commoner diseases of the throat and naso-pharynx, and presenting the salient features in an intelligible and interesting manner.

During the Course of a Laparotomy, when the surgeon wishes to know which end of a divided coil of intestine is on the stomach side, it is only necessary to touch the peritoneal coat of the bowel with a crystal of sodium carbonate, the effect of which is to cause contraction in the direction of the stomach.—*The Medical Press.*

Surgical Suggestions.

In Appendicitis Dr. Bull finds the oblique incision preferable to the vertical, which he adopts only when the tumor is near the median line. The oblique incision should begin about an inch above the middle of Poupart's ligament, to extend three or four inches upward and outward through a point midway between the anterior superior spine and the navel.

Pleuritic Effusion in infants, when general, should have the point of incision farther forward than in the case of an adult, the anterior axillary line being selected instead of the posterior.—Plicque.

Cœliotomy and ventro-fixation for displacements of the uterus and for residue of inflammatory processes are unjustifiable until the case has first been subjected to a thorough trial with pelvic massage.—Vineberg.

Tuberculosis of Larynx.—When ulcerated, apply saturated solution of resorcin, and avoid lactic acid and ethereal solutions of iodoform, which are very painful.—Tymowski.

Infantile Eczema of the head.—

Iodoform	gm. 1
Vaseline	gm. 30

Twice the strength for those over a year and three or four times for those from nine to fifteen.—Baumel.

Mammary Abscess.—Incise in line radiating toward nipple. Curette thoroughly abscess cavity, douche and pack with one per cent. carbolized gauze, and after a few days apply gauze externally, and over it a large flat sponge covered with oiled silk and firmly bound on.—Weber.

Operate in appendicitis, if salines in liberal doses fail to produce free catharsis, or if, after catharsis, the pain and fever are not relieved or are aggravated.—Jonas.

A Practical Sterilization Apparatus for Surgical Uses.—Kronacher gives a description of a sterilizing apparatus for instruments made of copper, and adapted for both moist and dry sterilization. The instruments are placed first on a removable tray and immersed in the hot soda solution and boiled. The vessel containing the hot solution is then removed, and the articles to be sterilized replaced in the apparatus and subjected as long as desired to dry heat.—*Centralblatt für Chirurgie, No. 39.*

Puff-ball (*Ivcopydon giganteum*) has been found a useful hæmostatic in bleeding from the gums as well as elsewhere. Thin slices are cut and applied to the surface, or, in alveolar hemorrhage, packed about the tooth.—Smith.

A Laryngeal Brush, with the hairs pointing upward, offering resistance on removal, is recommended by Dr. Palmer (*Ontario Medical Journal*) for the ready extraction of membrane causing stenosis. No child should die asphyxiated in diphtheria, he says, without this simple expedient being tried.

Gottstein's Posterior Nasal Curette is far superior to any other instrument for removal of adenoid growths. Anæsthesia is not necessary: one stroke is sufficient, and the improved instrument is so curved that injury to adjacent structures is impossible if properly introduced.—Bennett.

Caries of Coccyx is very infrequent, especially in the male. History of injury, constant pain, multiple and persistent sinuses are usually present. Excision is the best treatment.—Darrah.

Local Anæsthesia is said to be readily produced in about one minute by a spray of menthol, one part; chloroform, ten parts; ether, fifteen parts. The anæsthesia continues from two to six minutes.—Dobisch.

Surgical Shock.—Strychnine in full dose (gr. $\frac{1}{20}$) hypodermically every half hour.—Harl.

Flaming the surface of surgical wounds with the blowpipe, especially in tuberculosis, is recommended by Felizet. The margins of the wound are protected with antiseptic compresses. The reaction from passing the flame rapidly over the surface is insignificant.—*Medical Press.*

Contraindications to Wiring the Patella are advanced age; the presence of kidney lesion; diabetes; markedly impaired general health; addiction of the patient to alcoholism, when delirium tremens would be likely to follow the most trivial operative procedure; when the soft parts have sustained severe injury, making sloughing liable; as well as when the fracture is of the stellate variety, whether simple or compound.—Deaver.

Impassible Stricture may be overcome by injecting the canal full of a four per cent. cocaine solution, mixed with a one per cent. sublimate solution in equal parts, and passing the sound without letting the fluid escape. It is thought that the distention by the fluid is one factor, and decongestion of the mucous membrane by the cocaine another, in facilitating the entrance of the instrument.—*Gaz. hebd. des Soc. Méd. de Bordeaux.*

Accessible morbid growths should be excised as soon as discovered, however small or apparently harmless, because they are worse than useless to the human economy, because of their liability to be transformed into malignant tumors, and because no means are yet known by which to ascertain the exact time of the beginning of metamorphic action.—Gouley.

Carcinoma of Tongue in one hundred and twenty two operations in Billroth's clinic gave mortality as direct result of operation in ten per cent. of cases.

Compound Fracture.—The important points to be observed are: 1. That every compound fracture of the thigh, leg, arm, or forearm should be rendered scrupulously surgically clean, and should be absolutely immobilized. 2. That this immobilization is conveniently obtained by the light, circular plaster-of-Paris washed bandage. 3. That a plaster of-Paris bandage should be allowed to remain on a limb over a fortnight in the first month of treatment of a compound fracture, as backward bowing and lateral displacement can be avoided by this precaution. 4. That while pus, slough, necrosis, or deformity may exceptionally occur, yet the rule is union by first intention and the early restoration of limbs to usefulness.—*Boston Medical and Surgical Journal.*

Umbilical Hernia in the female should be treated by radical operation, and not by mechanical support. The silver-wire suture, if properly adjusted, can be worn from three to five weeks without causing irritation.—Dudley.

Retroversion of Uterus with Adhesions (Schultze's method).—The patient is etherized, and the fundus of the uterus carried somewhat forcibly upward by means of one or two fingers inserted into the rectum: the cervix being forced backward simultaneously by the thumb in the vagina, and with the other hand the fundus is held up against the abdominal wall and worked forward, if possible, a little anterior of its normal position. A Thomas modification of the Albert Smith pessary with a large bulb at the top (constructed of soft rubber) is then inserted, the patient put to bed, and kept there a week, attended as carefully as if she had undergone a serious operation.

Red Blood-clots of irregular shape passed at the end of micturition, and the total want of benefit from ordinary hæmostatics, are important signs in the diagnosis of bladder tumor.—Wallace.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 17, 1893.

	Cases.	Deaths.
Typhus fever	4	6
Typhoid fever	13	5
Scarlet fever	145	13
Cerebro-spinal meningitis	10	15
Measles	190	6
Diphtheria	114	46
Small-pox	9	2
Cholera	0	0
Varciella	0	0
Pertussis	0	0
Erysipelas	0	0
Leprosy	0	0

A Disaster happily Averted.—The editor of the *Medical Mirror*, commenting upon some cases of chancre of the lip reported by Dr. Bulkley, says: "The above recalls to my mind an experience in my own home some twelve or thirteen years ago. With an only child, to which I was devotedly attached, we had in our employ a house-servant, the chief objection to whom was her coldness and seeming lack of love for children. We felt that however good and faithful a worker she might be, that this one objection was not to be overlooked; however, she remained with us several months, and to my knowledge a young gentleman of excellent family connection visited her of evenings. She was warned against him on the ground that his intentions could not be honorable; however, his visits from time to time continued, she believing that we were in error in our judgment. One morning the maid presented herself in my office, asking for some soothing salve for an annoying ulcer on her lip. It was angry and indurated, and yet did not arouse my suspicion until several weeks later I was summoned one morning to see her by the announcement that she had an attack of the measles. Investigation soon developed a clear pronounced secondary eruption. The offending ulcer was a distinct chancre received from the young man whose visits had been objected to. The moral was distinct and never forgotten. From that time in our family, affectionate manifestations upon the part of housemaids to children were not insisted upon, and we felt gratified in the knowledge of the fact that there had been no bond of sympathy between the girl and our child."

The True Sweetbread, regarded by gourmets as a great delicacy, is the thymus gland of the calf. As a rule, this is found only in the fœtus and young calf, under the lower surface of the trachea, "partly without and partly within the chest, between the layers of the anterior mediastinum." It is occasionally persistent, but usually disappears within a few months after birth. It is elongated, of a grayish-white color, irregular—that is, lobulated on its surface, and much more resembling a salivary gland and the pancreas than the thyroid. It is commonly known among butchers as the "throatbread," and is rarely found except in animals supplying young veal or lamb. The pancreas is vulgarly termed the "gutbread" or "belly sweetbread," and is the article which would be supplied in the great majority of cases by butchers asked for sweetbread. The thyroid is situated at the upper part of the neck, not at its root, and is not regarded as a favorite article of diet. Though the lobes are closer together than in man, they are spoken of as two, each being named a "kernel" or "gland." As far as we can learn, they are not ordinarily included among the sweetbreads. As compared with the thymus and pancreas, the thyroid is very small, regular on the surface, ovoid in shape, reddish-brown in color, situated at the upper part and not at the root of the neck. The thyroid is sometimes confused by butchers with the lymphatic glands of the neck. Its dark color and characteristic shape—convex externally while somewhat concave and flattened where it rests against the trachea—should prevent this mistake. While thymus and pancreas are valued highly, the market value of the thyroid is inconsiderable, and until its association with myxœdema it was rarely asked for. —*British Medical Journal.*

Cruel Anti-vivisectionists.—The aigrette in a lady's bonnet is the crowning beauty of an egret mother. The collector—and each nesting season fifty men are employed in this business—waits till she is on her nest, her little breast full of peace, and the young just hatched, so that the mother will not leave them easily, though alarmed. He ruthlessly seizes her, tears off her crowning plumes and her wings, and then throws her down, gasping, torn, and fluttering, to die beside her little ones, who, deprived of her fostering care, die also miserably. Lately, at a meeting of anti-vivisectionists, it was a curious instance of "the evil wrought through want of thought" that many of the ladies protesting against the cruelty of vivisection wore these very egret plumes in their bonnets.—*Cornhill Magazine.*

A Heavy, Dull Headache, situated over the brow, and accompanied by languor, chilliness, and a feeling of general discomfort, with distaste for food, which sometimes approaches to nausea, can generally be completely removed by a two-grain dose of the iodide of potassium dissolved in half a wine-glass of water, and this quietly sipped, the whole quantity being taken in about ten minutes. In many cases the effect of these small doses has been simply wonderful. A person who, a quarter of an hour before, was feeling most miserable and refused all food, wishing only for quietness, would now take a good meal and resume his wonted cheerfulness. The rapidity with which the iodide acts in these cases constitutes its great advantage.—*Alienist and Neurologist.*

Do Those who are seriously Ill ever Sneeze?—This is a point alluded to by Mr. Jonathan Hutchinson in the January number of his *Archives*. He does not recollect himself to have seen any but fairly healthy persons sneeze. He puts the question with especial reference to the widely spread popular superstition that sneezing is a sign of health and good luck. It is possible, he thinks, that this may have had its origin in the fact that it is for the most part an act restricted to those in fair health. Tylor, in his "Primitive Culture," gives interesting facts as to the prevalence of this creed and as to certain customs associated with it, and traces it in part to doctrines of animism, but Mr. Hutchinson thinks the suggestion he has given may also have some value.—*Sheffield Medical Journal.*

A Royal Ophthalmologist.—Duke Charles Theodore, a member of the royal family of Bavaria, performed his two-thousandth operation for cataract at his private hospital in Munich, on Friday, April 1st. The operation room was decorated with flowers by the Sisters of Mercy employed in the establishment. Duke Theodore performed his thousandth operation for cataract on July 3, 1889.

Artificial Ice.—The Massachusetts State Board of Health has been conducting an examination of artificial ice manufactured around Boston, and found that it was of good quality and wholesome, although the samples made by one company from boiled, but not distilled spring-water contained a large amount of mineral matter. The following are the conclusions of the Board: 1. Artificial processes of freezing concentrate the impurities of the water in the inner core, or the portion last frozen. 2. The impurities are reduced to their lowest terms by the use of distilled water (condensed steam) for the manufacture of ice. 3. The number of bacteria in artificial ice is insignificant, under the prevailing methods of manufacture. 4. The amount of zinc found in the samples of melted artificial ice under observation is insufficient to injure the health of persons using such ice.

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